

Federal Government Mapping Resources

Experiences from a Virtual Reference Desk

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Map & Geospatial Information Librarian

Resources Covered

- [USGS Earth Explorer](#)
- [USGS topoView](#)
- [USGS Historical Topographic Map Explorer](#)
- [USDA Web Soil Survey](#)
- [National Geologic Map Database](#)

Bonus

- [USGS Streamer](#)
- [US Census – Flows Mapper](#)
- [US Census – OnTheMap](#)
- [Climate Mapping for Resilience and Adaptation](#)

USGS Earth Explorer – Aerial Imagery

The screenshot displays the USGS Earth Explorer web interface. At the top left is the USGS logo with the tagline "science for a changing world". The main navigation bar includes "EarthExplorer" and "Manage Criteria". On the right side of the navigation bar, there are links for "System Notification (1)", "Item Basket (0)", "Help", "Feedback", and "Logout [matt0089]".

The interface is divided into several sections:

- Search Criteria Summary (Show):** A yellow header bar with a "Clear Search Criteria" link on the right.
- 1. Enter Search Criteria:** A sidebar panel containing:
 - Buttons for "Geocoder" and "KML/Shapefile Upload".
 - A "Select a Geocoding Method" dropdown menu set to "Feature (GNIS)".
 - Search Limits:** A note stating "The search result limit is 100 records; select a Country, Feature Class, and/or Feature Type to reduce your chances of exceeding this limit." Below this are "US Features" and "World Features" tabs.
 - Input fields for "Feature Name" (with a note "use % as wildcard") and "State" (set to "All").
 - A "Feature Type" dropdown menu set to "All".
 - "Show" and "Clear" buttons.
 - Buttons for "Polygon", "Circle", and "Predefined Area".
 - Buttons for "Degree/Minute/Second" and "Decimal".
 - A status indicator "No coordinates selected." and buttons for "Use Map", "Add Coordinate", and "Clear Coordinates".
 - Buttons for "Date Range", "Cloud Cover", and "Result Options".
 - Input fields for "Search from:" and "to:" (both in mm/dd/yyyy format) and a "Search months:" dropdown set to "(all)".
 - Buttons for "Data Sets", "Additional Criteria", and "Results".
- Map:** A large aerial satellite image of the central United States, showing states like South Dakota, Nebraska, Iowa, and Wisconsin. Major cities such as Pierre, Sioux Falls, Sioux City, Omaha, Lincoln, St. Paul, and Minneapolis are labeled. A coordinate box in the top right corner shows "(45° 46' 58\" N, 102° 32' 47\" W)".
- Footer:** A blue bar at the bottom of the map area with the text: "The provided maps are not for purchase or for download; they are to be used as a guide for reference and search purposes only; they are not owned or managed by the USGS."

****If you want to download anything, you will need to create a (free) account****

1. Enter Search Criteria

To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area (for advanced map tools, view the [help documentation](#)), and/or choose a date range.

Geocoder KML/Shapefile Upload

Select a Geocoding Method

Feature (GNIS)

Search Limits: The search result limit is 100 records; select a Country, Feature Class, and/or Feature Type to reduce your chances of exceeding this limit.

US Features World Features

Feature Name

(use % as wildcard)

State

All

Feature Type

All

Show Clear

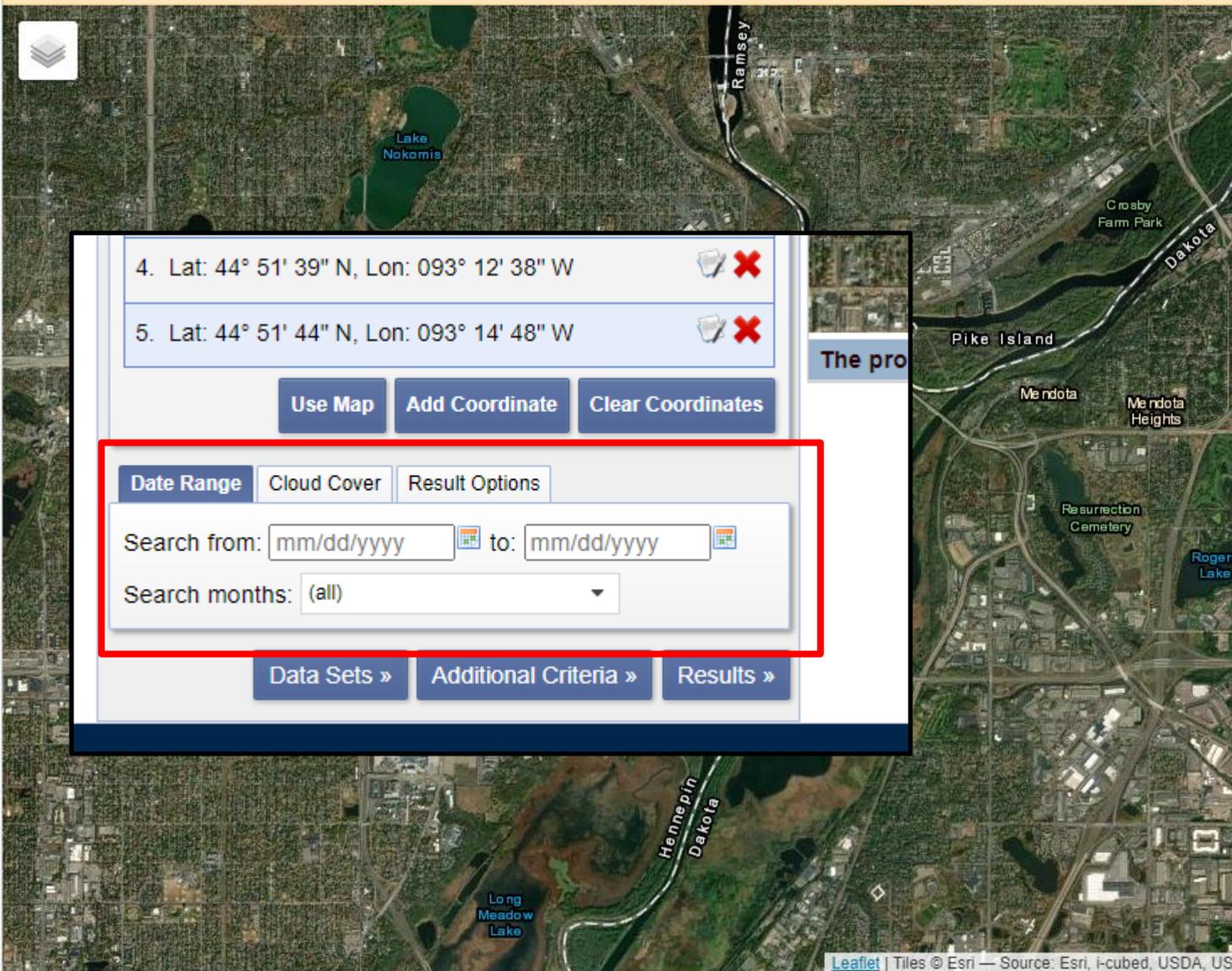
Polygon Circle Predefined Area

Degree/Minute/Second Decimal

- 1. Lat: 44° 53' 45" N, Lon: 093° 14' 49" W
- 2. Lat: 44° 53' 47" N, Lon: 093° 11' 22" W
- 3. Lat: 44° 52' 48" N, Lon: 093° 11' 21" W
- 4. Lat: 44° 51' 39" N, Lon: 093° 12' 38" W
- 5. Lat: 44° 51' 44" N, Lon: 093° 14' 48" W

Use Map Add Coordinate Clear Coordinates

Search Criteria Summary (Show)



2. Select Your Data Set(s)

Check the boxes for the data set(s) you want to search. When done selecting data set(s), click the *Additional Criteria* or *Results* buttons below. Click the plus sign next to the category name to show a list of data sets.

Use Data Set Prefilter [\(What's This?\)](#)

Data Set Search:

This data set list is cached for performance. If your user permissions have changed or you are not seeing an expected dataset, [click here to refresh your list](#).

Aerial Imagery

- ASAS
- Aerial Photo Mosaics
- Aerial Photo Single Frames
- Aircraft Scanners
- Antarctic Flight Line Maps
- Antarctic Single Frames
- DOQ
- High Resolution Orthoimagery
- NAIP
- NHAP
- NAPP
- PAO Image Gallery
- SD NRCS Section Photos
- SLAR
- Space Acquired Photography

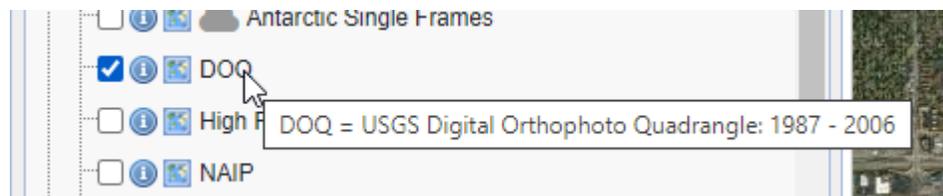
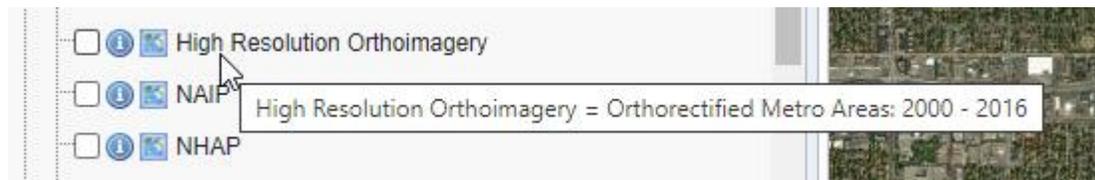
AVHRR

CEOS Legacy

Clear All Selected

Additional Criteria »

Results »



4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Note: You must be logged in to download and order scenes

Show Result Controls

Data Set

[Click here to export your results »](#)

Aerial Photo Single Frames

Aerial Photo Single Frames

DOQ

High Resolution Orthoimagery

NAIP

NAPP

Acquisition Date: 2006-04-17

Scale: 21600

SCENES

Show Result Controls

Data Set

[Click here to export your results »](#)

High Resolution Orthoimagery

« First < Previous 1 of 2 Next > Last »

Displaying 1 - 100 of 111



Entity ID: 4075494_R3MN120150921ORTHORGB1

Acquisition Date: 2015-09-21

State: MN

Coordinates: 44.8504305555556 ,

-93.2240694444444



Entity ID: 4060757_R3MNMNVLML20150812ORTH

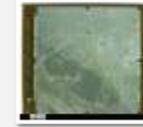
Data Set

[Click here to export your results »](#)

Aerial Photo Single Frames

« First < Previous 1 of 1 Next > Last »

Displaying 1 - 69 of 69



Entity ID: ARUMSP060010018

Coordinates: 44.848148 , -93.232828

Acquisition Date: 2006-04-17

Scale: 21600



Entity ID: ARUMSP060010019

Data Set

[Click here to export your results »](#)

NAIP

« First < Previous 1 of 1 Next > Last »

Displaying 1 - 40 of 40



Entity ID: M_4409306_SE_15_060_20210618

Coordinates: 44.9065027 , -93.281011

Acquisition Date: 2021-06-18



Entity ID: M_4409307_SE_15_060_20210618

Coordinates: 44.9065055 , -93.1560166

Acquisition Date: 2021-06-18



Entity ID: M_4409307_SW_15_060_20210618

Coordinates: 44.9065055 , -93.2465100

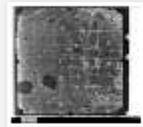
Data Set

[Click here to export your results »](#)

NAPP

« First < Previous 1 of 1 Next > Last »

Displaying 1 - 22 of 22

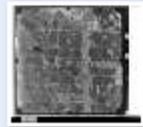


Entity ID: N10NAPPW08865099

Coordinates: 44.90625 , -93.28125

Acquisition Date: 1996-10-01

disable_overlay: N



Entity ID: N10NAPPW08865100

Coordinates: 44.875 , -93.28125

Acquisition Date: 1996-10-01

disable_overlay: N



4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Note: You must be logged in to download and order scenes

Show Result Controls

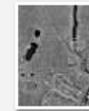
Data Set

[Click here to export your results »](#)

DOQ

« First < Previous 1 of 1 Next > Last »

Displaying 1 - 2 of 2

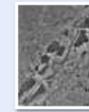


Entity ID: DI00000000030629

Acquisition Date: 1991-04-17

Map Name: SAINT PAUL WEST

State: MN



Entity ID: DI00000000030631

Acquisition Date: 1991-04-17

Map Name: SAINT PAUL SW

State: MN



« First < Previous 1 of 1 Next > Last »



scenes

Show Result Controls

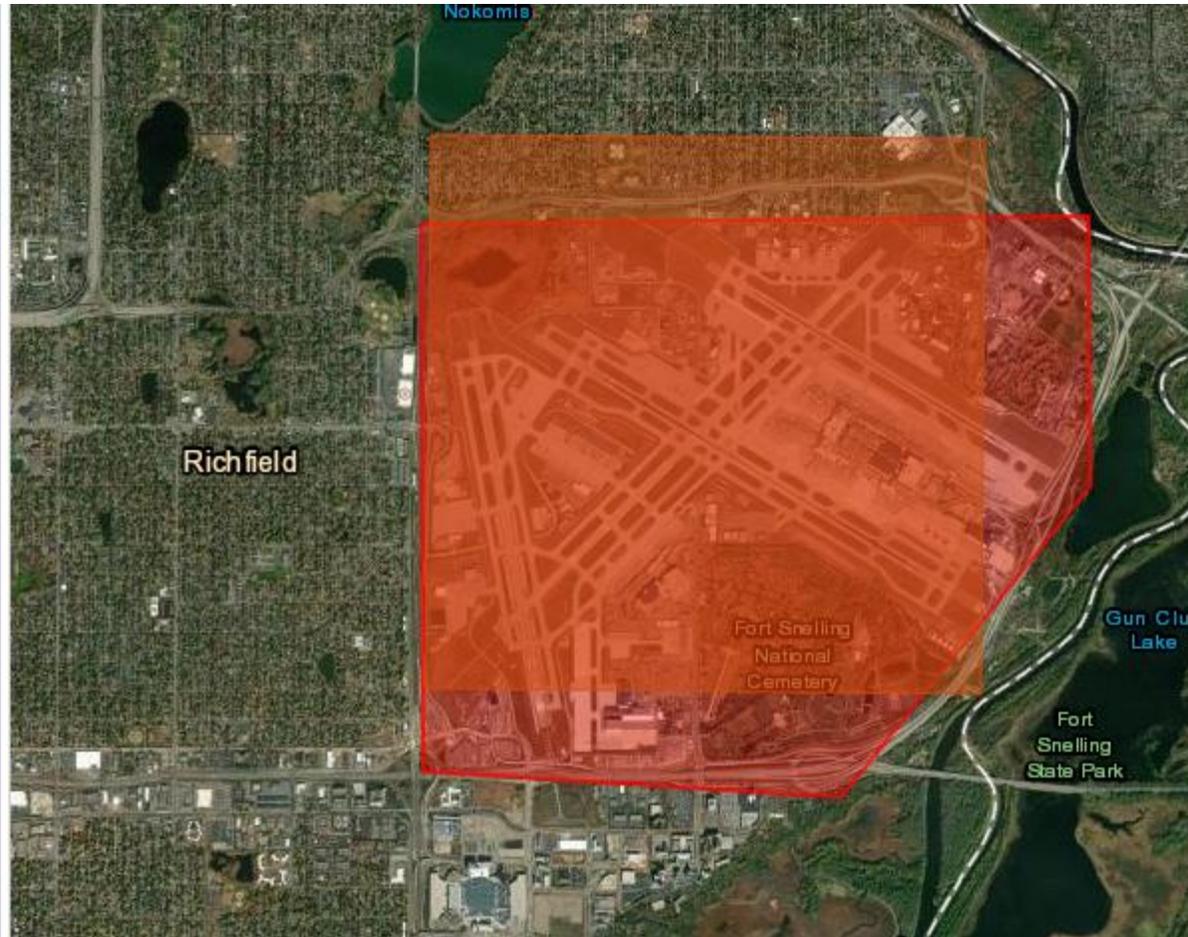
Data Set [Click here to export your results »](#)

Aerial Photo Single Frames

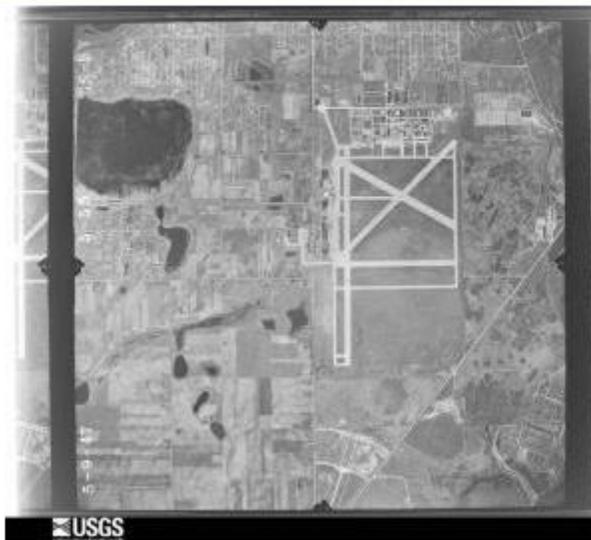
Entity ID: AR1DV0000050055
Coordinates: 44.88437 , -93.222469
Acquisition Date: 1947-05-09
Scale: 17000

Entity ID: AR1DV0000050056
Coordinates: 44.88402 , -93.202907
Acquisition Date: 1947-05-09
Scale: 17000

Entity ID: AR1DV0000050057
Coordinates: 44.885227 , -93.182841
Acquisition Date: 1947-05-09
Scale: 17000



Full Display of AR1DV0000050055



Standard Browse

← Rotate 90° Left

Rotate 90° Right →

Data Set Attribute	Attribute Value
Entity ID	AR1DV0000050055
Agency	1
Vendor ID	

Open New Window

Close



GS-DV

5-55

5-9-47

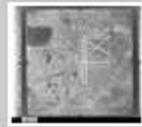
scenes

Show Result Controls

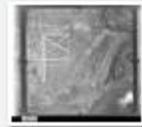
Data Set

[Click here to export your results](#)

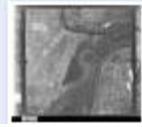
Aerial Photo Single Frames



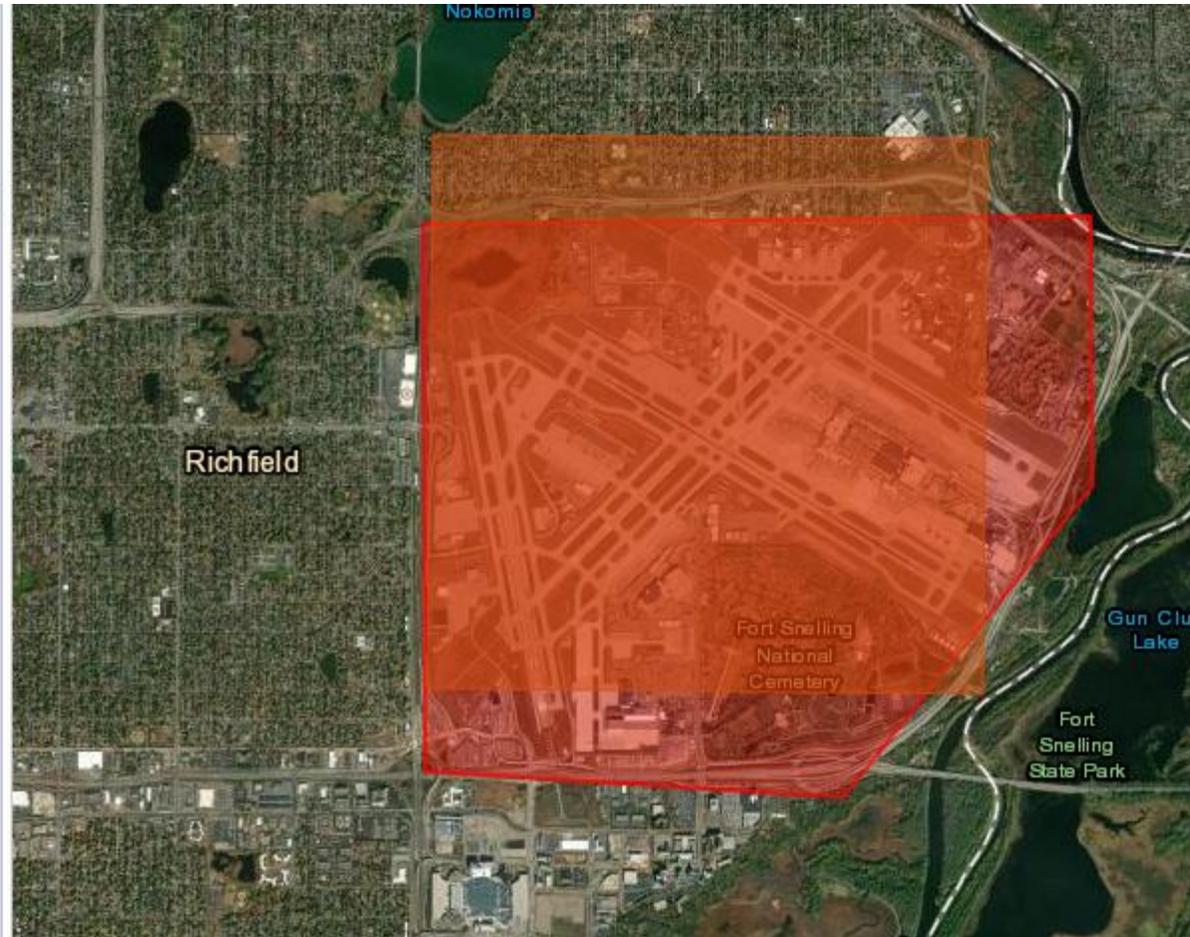
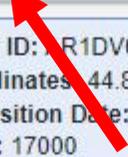
Entity ID: AR1DV0000050055
Coordinates: 44.88437 , -93.222469
Acquisition Date: 1947-05-09
Scale: 17000



Entity ID: AR1DV0000050056
Coordinates: 44.88402 , -93.202907
Acquisition Date: 1947-05-09
Scale: 17000



Entity ID: AR1DV0000050057
Coordinates: 44.885227 , -93.182841
Acquisition Date: 1947-05-09
Scale: 17000





Todd Park

Edward C Solomon Park

Taft Lake

Taft Park

Veterans Park

hfield

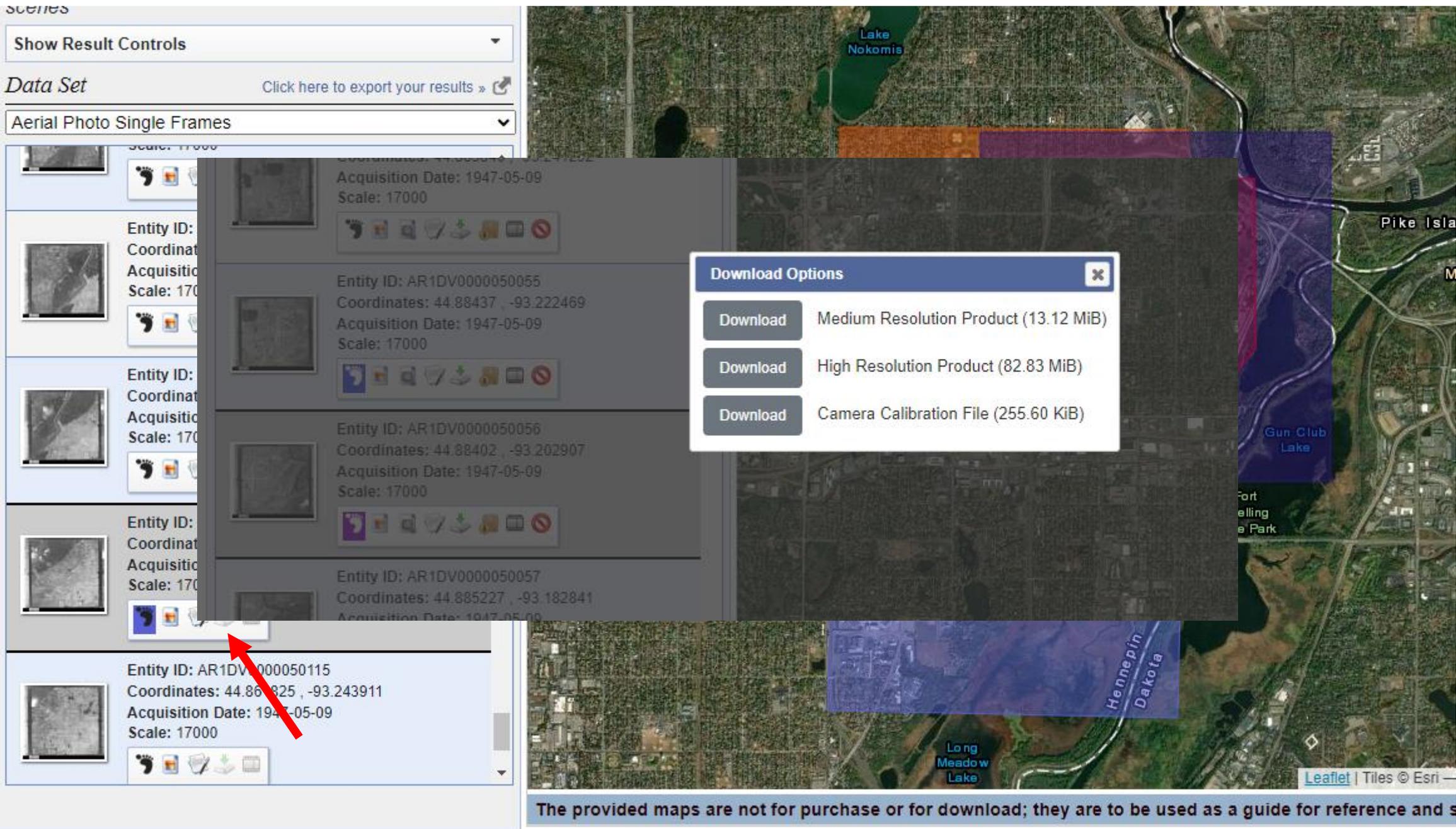
Fort Snelling Golf Course

Snelling Lake

Hennepin Dakota

Mississippi

USGS
science for a changing world



Download Options [X]

Medium Resolution Product (13.12 MiB)

High Resolution Product (82.83 MiB)

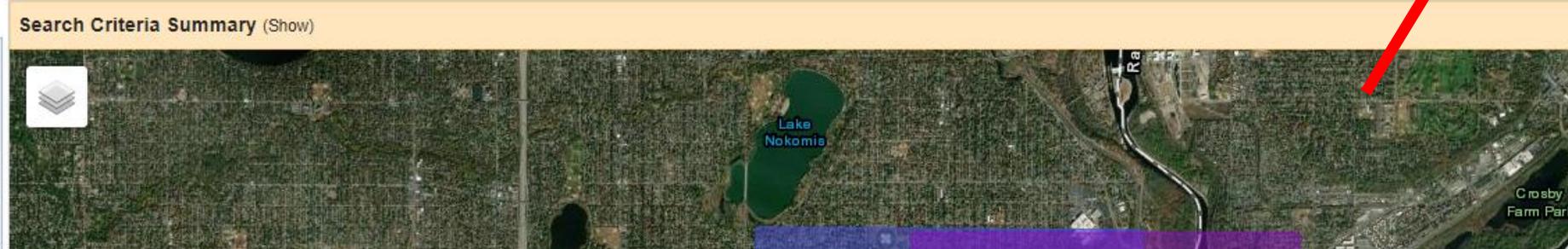
Camera Calibration File (255.60 KiB)

Search Criteria Data Sets Additional Criteria **Results**

4. Search Results
 If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Show Result Controls

Data Set [Click here to export your results](#)



Bulk Download - 3 Items

The [Bulk Download Web Application](#) is an easy-to-use tool for downloading large quantities of satellite imagery and geospatial data. This application allows users to download groups of submitted scenes that can be automatically executed without the user physically downloading each scene. This web interface replaced the legacy Java version of the application.

[Start Order](#)

Coordinates: 44.88402, -93.20297
 Acquisition Date: 1947-05-09
 Scale: 17000

Entity ID: AR1DV000050057
 Coordinates: 44.885227, -93.182841
 Acquisition Date: 1947-05-09
 Scale: 17000



Bulk Download - 3 Items

The [Bulk Download Web Application](#) is an easy-to-use tool for downloading large quantities of satellite imagery and geospatial data. This application allows users to download groups of submitted scenes that can be automatically executed without the user physically downloading each scene. This web interface replaced the legacy Java version of the application.

 **Aerial Photo Single Frames** (No pending selection, 3 selected) Options ▾

Displaying 1 - 3 of 3

Results Per Page: 100 ▾

< First

< Previous

1

Next >

Last >

AR1DV000050055

Medium Resolution Product (13.12 MiB)
High Resolution Product (82.27 MiB)
Camera Calibration File (255.60 KiB)



AR1DV000050056

Medium Resolution Product (13.12 MiB)
High Resolution Product (82.83 MiB)
Camera Calibration File (255.60 KiB)

AR1DV000050114

Medium Resolution Product (13.12 MiB)
High Resolution Product (80.72 MiB)
Camera Calibration File (255.60 KiB)

< First

Bulk Download ▾

USGS/EROS <custserv@usgs.gov>

to me ▾

USGS Online Bulk Download Order Confirmation - MSP

To begin the download of your order, visit <https://eebulk.cr.usgs.gov/> to start the process.

For complete order details please navigate to the [Order Tracking](#) page of your settings in DDS. You will be required to login using your account.

Bulk Download Application - Web Version 1.0 Release

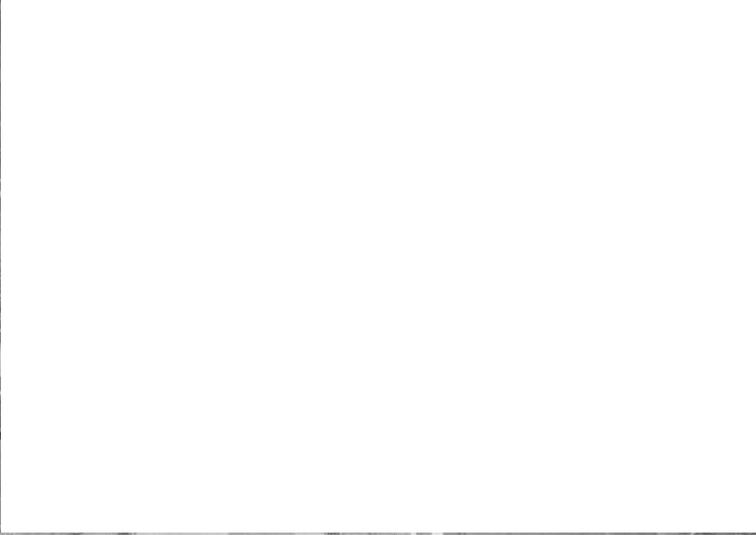
Bulk Download Orders

 Last Updated
8/9/2023, 2:44:14 PM

Order ID	Date Entered	Files Remaining	Size Remaining	
MSP	2023-08-09T19:40:06.757Z	3	39.36 MB	 

Data Set	Scene ID	Product	Filesize	Status	
Aerial Photo Single Frames	AR1DV0000050114	Medium Resolution Product	13.12 MB	Available	
Aerial Photo Single Frames	AR1DV0000050056	Medium Resolution Product	13.12 MB	Available	
Aerial Photo Single Frames	AR1DV0000050055	Medium Resolution Product	13.12 MB	Queued	

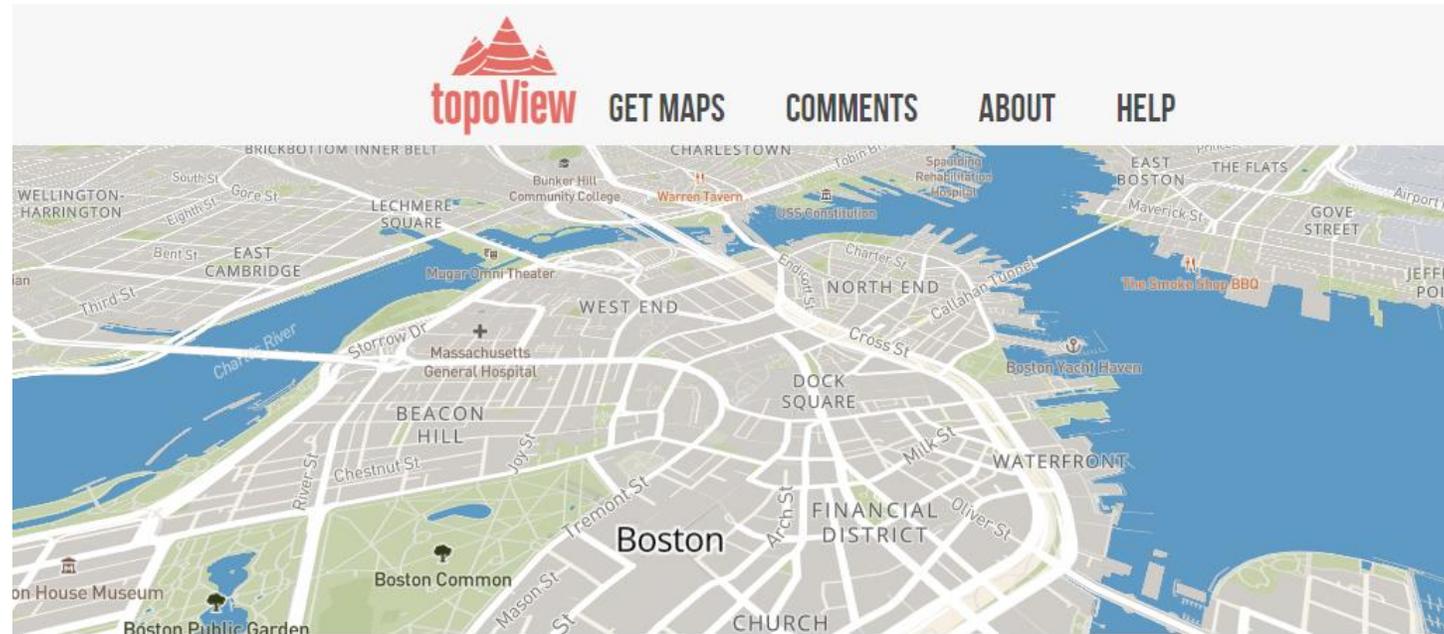








USGS topoView & Historical Topographic Map Explorer



The screenshot shows the top navigation bar with the 'topoView' logo and links for 'GET MAPS', 'COMMENTS', 'ABOUT', and 'HELP'. Below the navigation is a map of Boston, Massachusetts, with various neighborhoods and landmarks labeled, including the Charles River, Boston Common, and the Financial District.

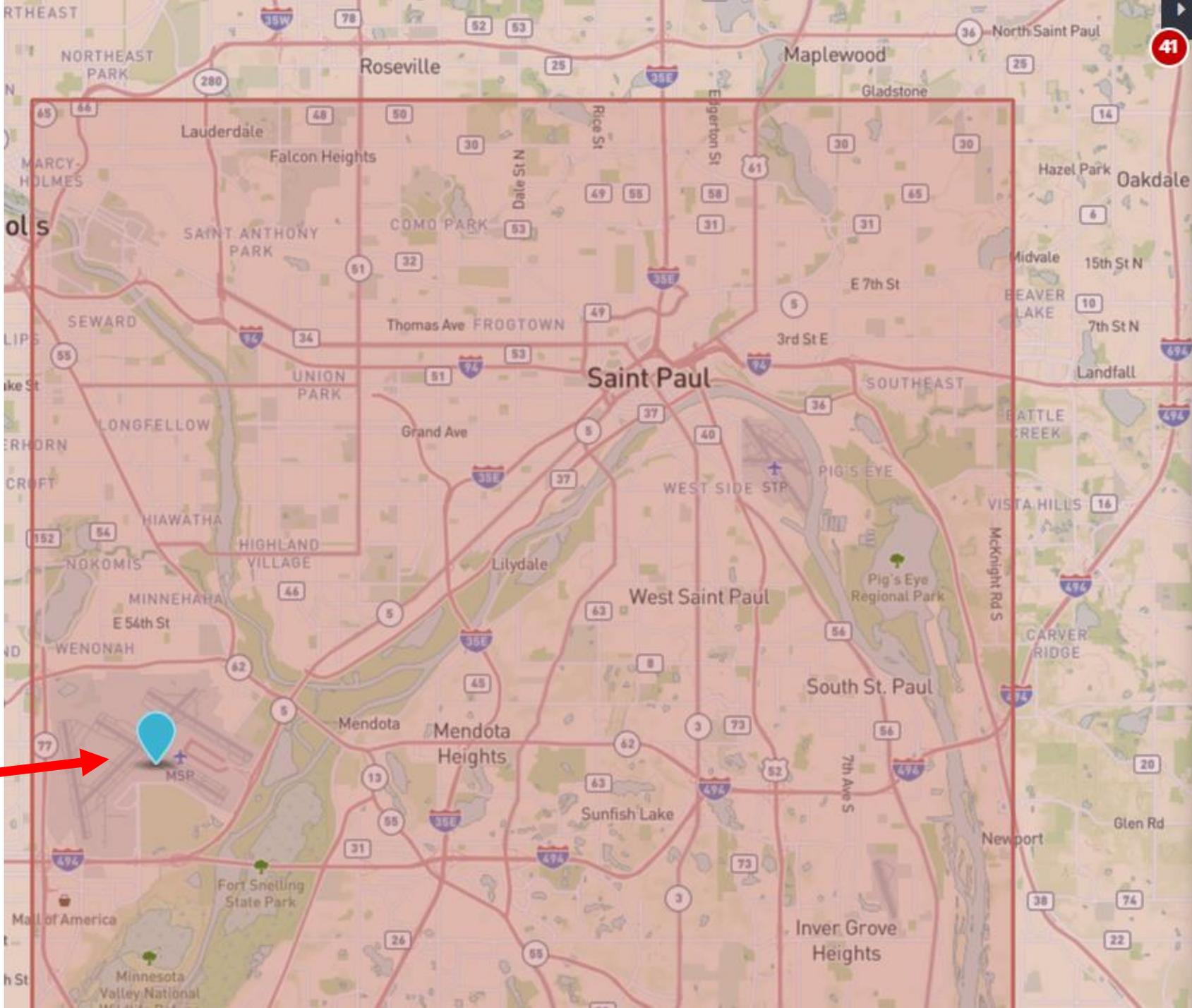
Accessing USGS Topographic Maps Has Never Been Easier

TopoView highlights one of the USGS's most important and useful products, the [topographic map](#). In 1879, the USGS began to map the Nation's topography. This mapping was done at different levels of detail, to support various land use and other purposes. As the years passed, the USGS produced new map versions of each area. TopoView shows the many and varied topographic maps of each of these areas through history. This can be particularly useful for historical purposes, such as finding the names of natural and cultural features that have changed over time.

This interface was created by the [National Geologic Map Database project](#) (NGMDB), in support of topographic mapping program managed by the [National Geospatial Program](#) (NGP). Geologic mapping and topographic mapping at the USGS have a long tradition together (see [1888 report](#)). The NGMDB project is proud to assist the NGP in bringing these maps to the Web.

 **View and Download**
maps now





Location Map Name

Search by location

1880 2023

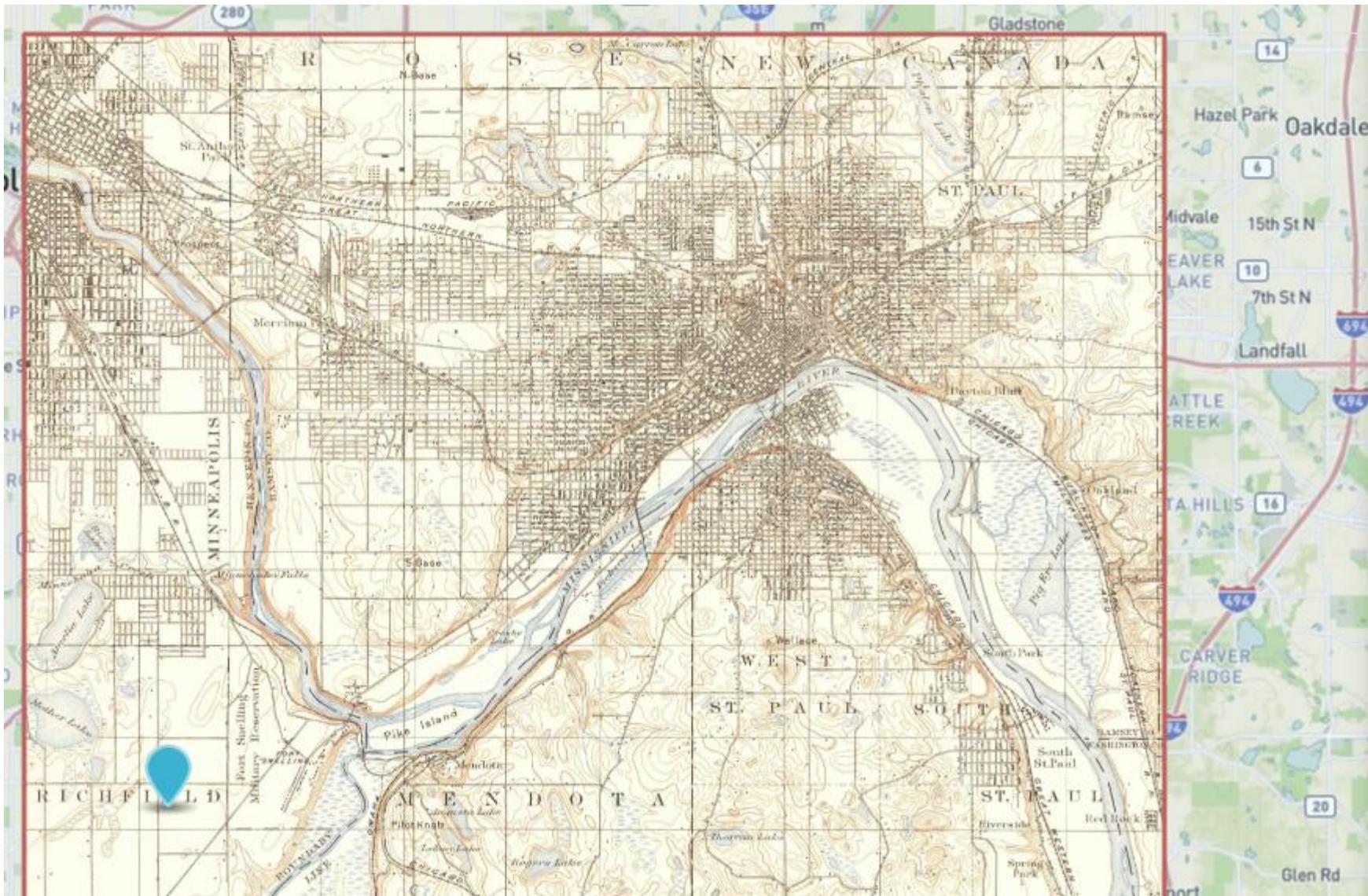
All 250K 100K 63K 48K 24K HTMC UST A

41 maps here Scale: All, Date: 1880-2023, Series: All

Elevation @ 44.879, -93.219 is 823 ft. (251 m)

Filter records

Name	Date	Scale	Status
1896 (HTMC, 1906 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1908 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1908 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1909 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1909 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1913 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1913 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1917 ed.)		Scale 1:62500	
St Paul, MN			
1896 (HTMC, 1917 ed.)		Scale 1:62500	
St Paul, MN			



1880 2023

All 250K 100K **63K** 48K 24K HTMC UST All

21 maps here | Scale: 63K, Date: 1880-2023, Series: All
Elevation @ 44.879, -93.219 is 823 ft. (251 m)

Filter records Name Date Scale State

St Paul, MN

1896 (HTMC, 1896 ed.) Scale 1:62500

↓ JPEG (6 MB) ↓ GeoTiff (6 MB)

↓ KMZ (2 MB) ↓ GeoPDF (10 MB)

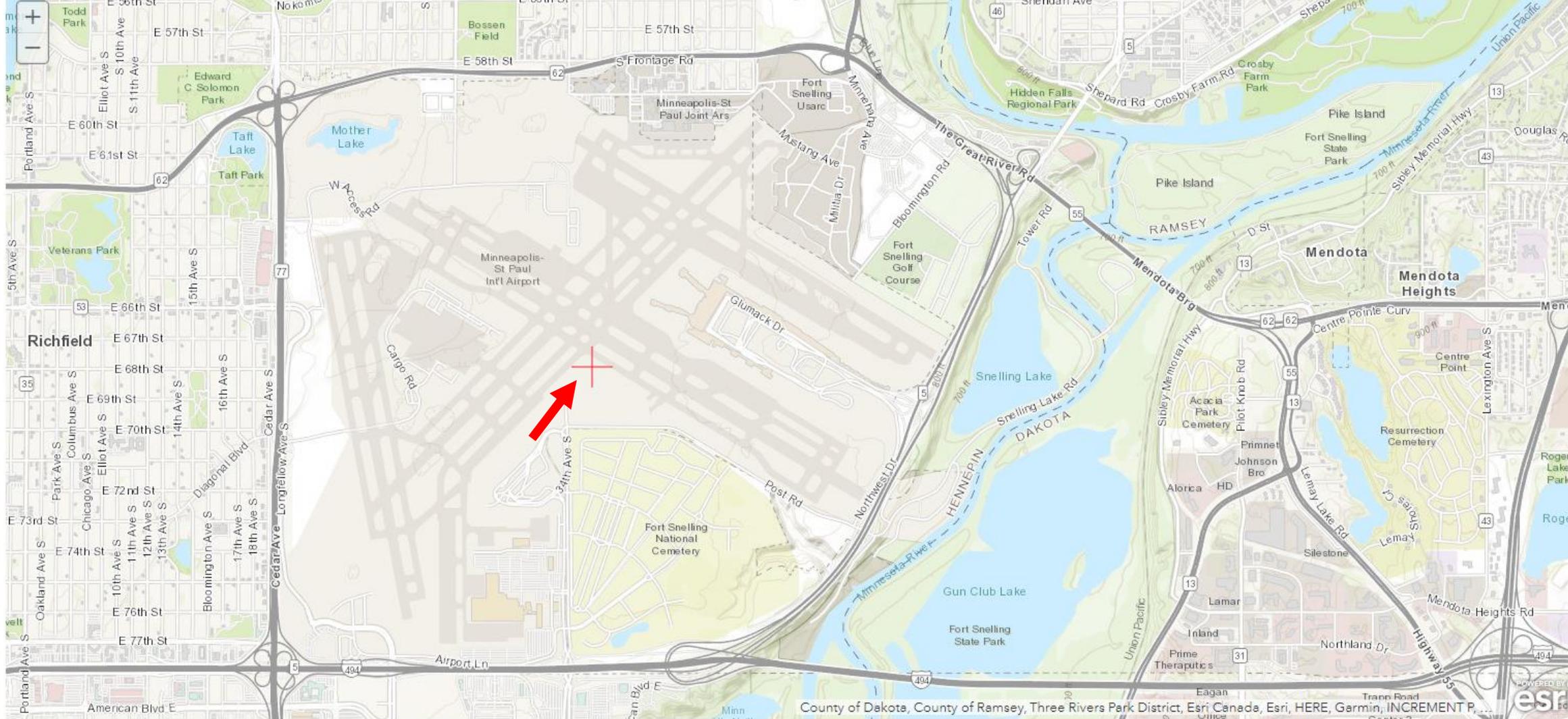
HIDE INFO ZOOM PAN PIN FIX

MAP TRANSPARENCY

St Paul, MN
1896 (HTMC, 1896 ed.) Scale 1:62500

St Paul, MN
1896 (HTMC, 1901 ed.) Scale 1:62500

St Paul, MN
1896 (HTMC, 1901 ed.) Scale 1:62500



Historical Map Scales



Find a place you want to explore, then Click on a location to see its historical maps.

Search bar containing 'msp airport'.

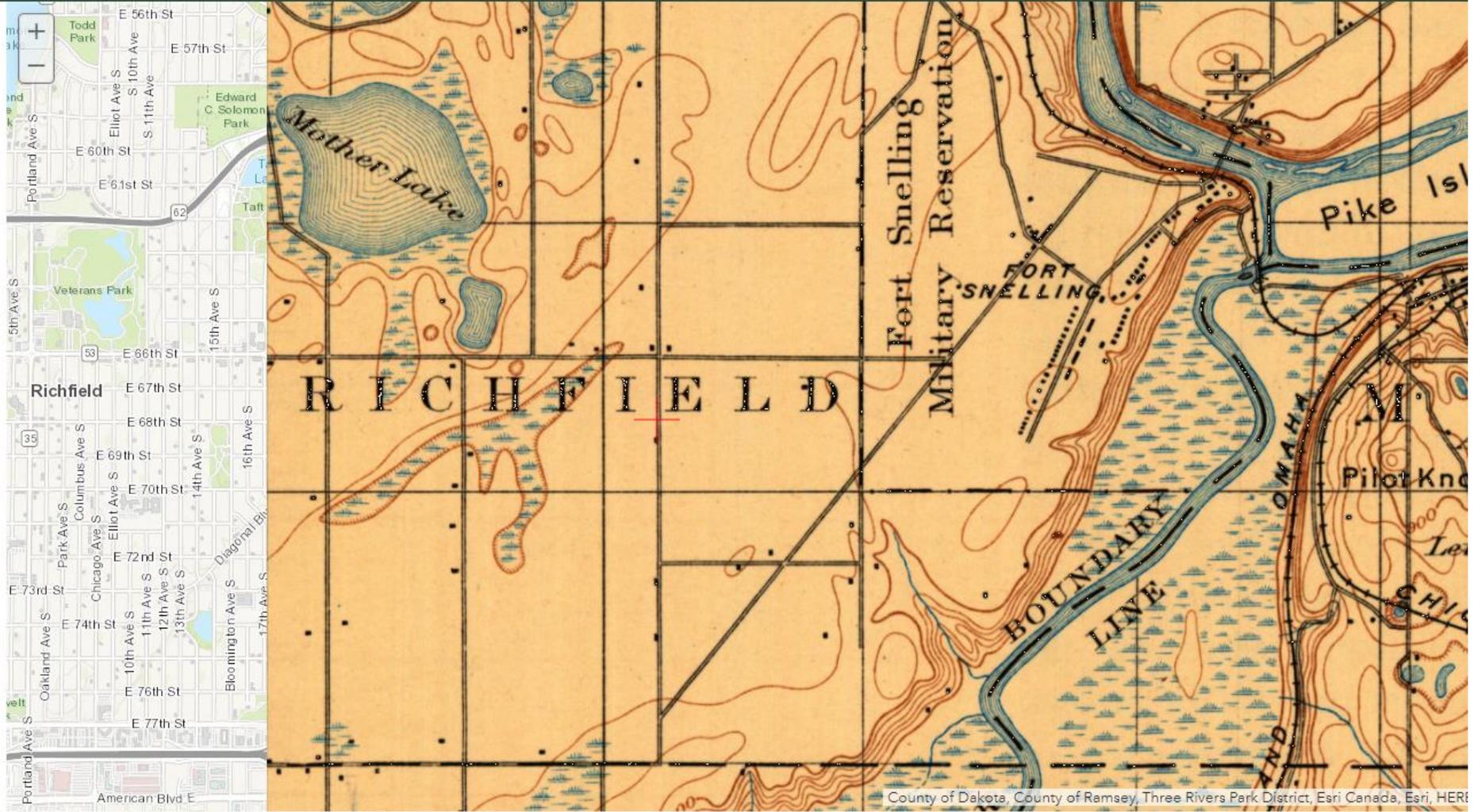
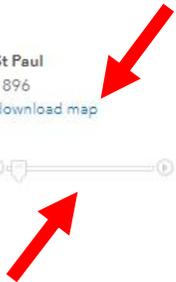
3 Compare maps using the transparency sliders, and Reorder maps by dragging them.

Sign in to save web maps to your ArcGIS Online account

Close button (X)



St Paul 1896 download map



Historical Map Scales

- 250,000
- 125,000
- 62,500
- 24,000
- 12,000

St Paul

Saint Paul

St Paul

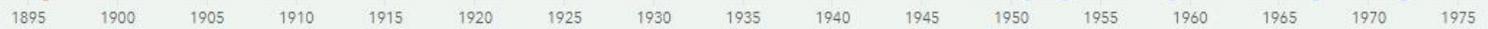
St Paul West

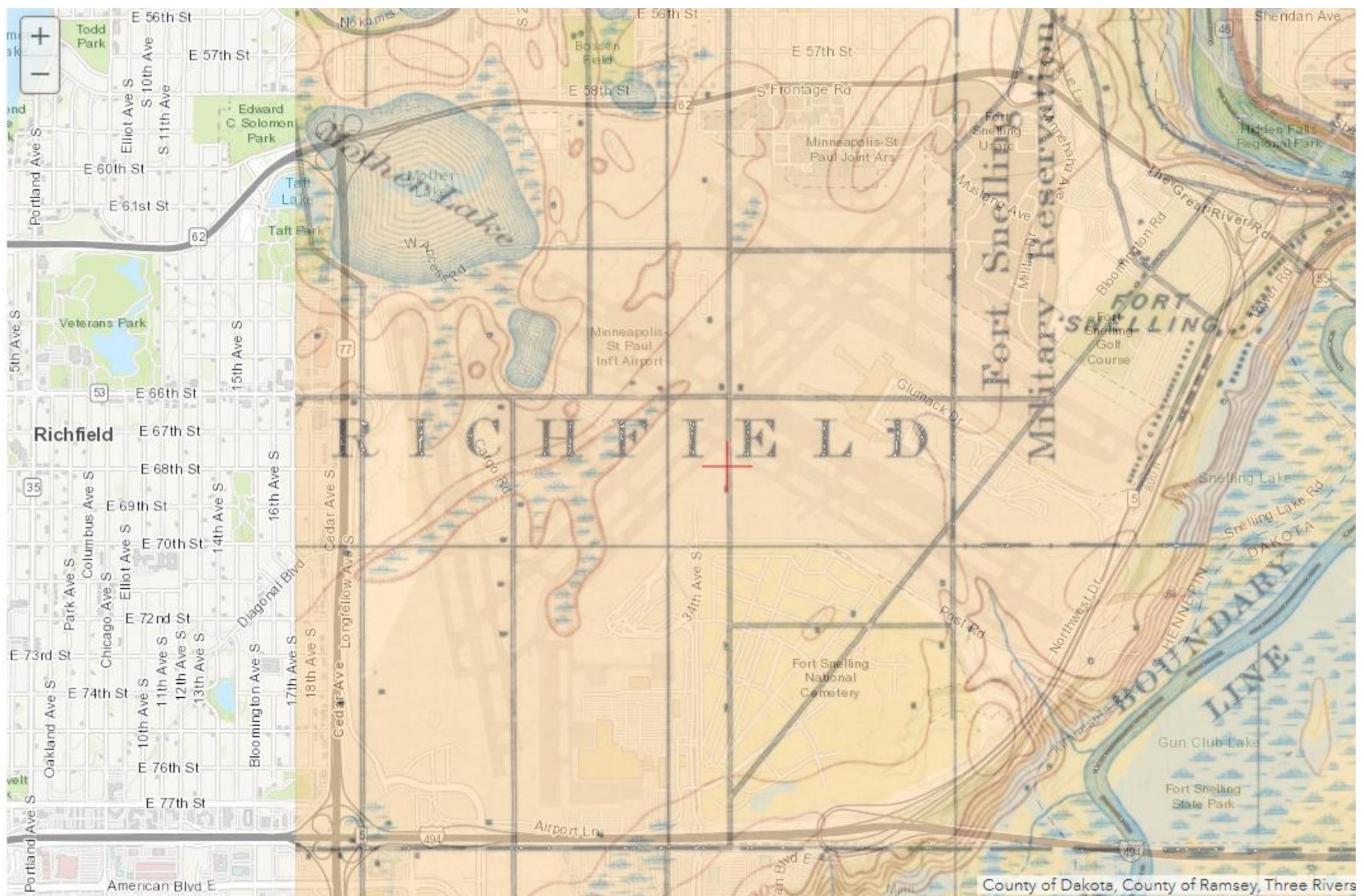
Saint Paul

St Paul West

St Paul West

St Paul West





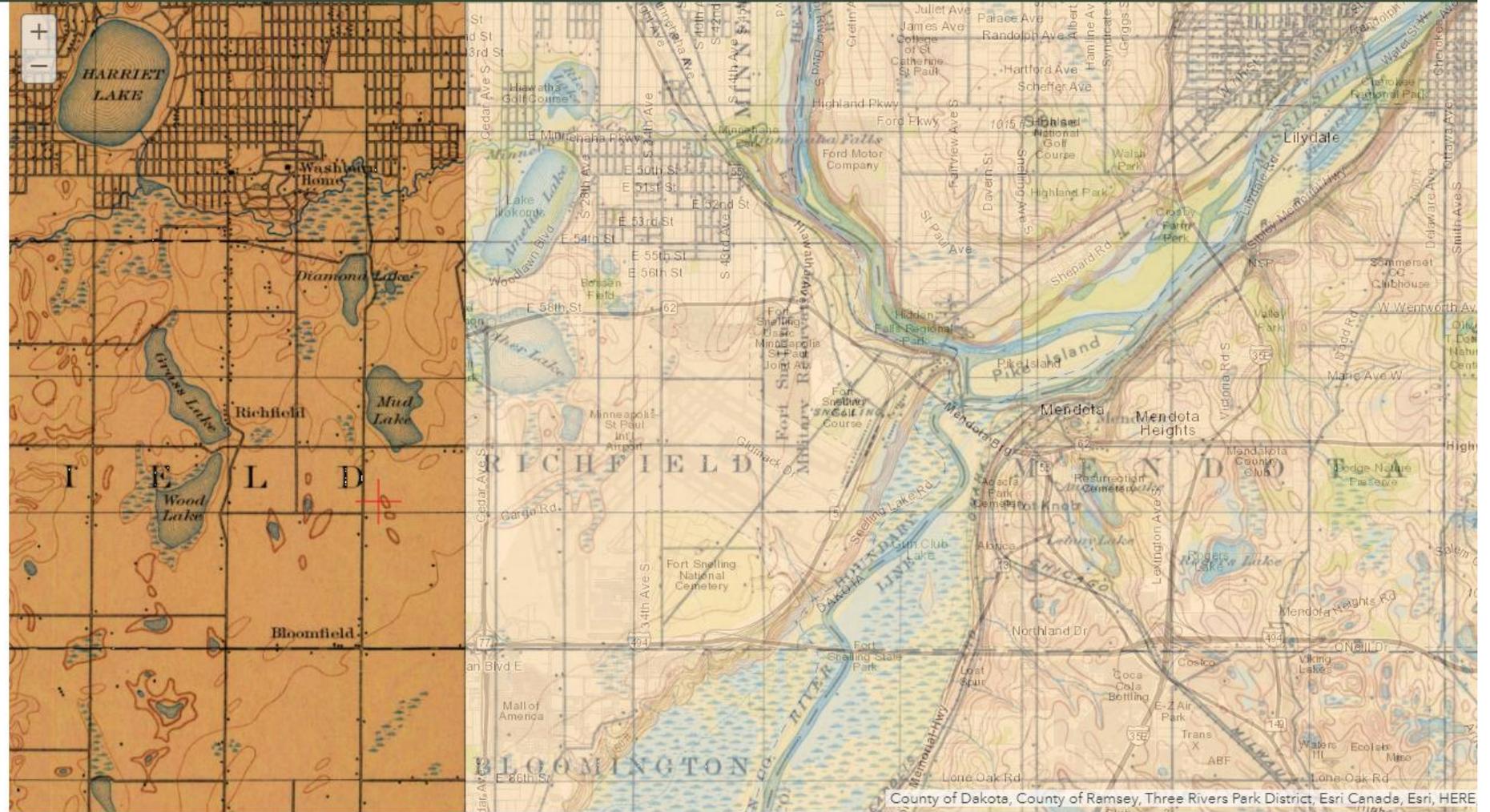
Find a place you want to explore, then
Click on a location to see its historical maps.

3 Compare maps using the transparency sliders, and
Reorder maps by dragging them.

[Sign in](#) to save web maps to your ArcGIS
Online account

Minneapolis
1896
[download map](#)

St Paul
1896
[download map](#)



Compare maps using the transparency sliders, and Reorder maps by dragging them.

[Sign in](#) to save web maps to your ArcGIS Online account



Anoka
1902
[download map](#)



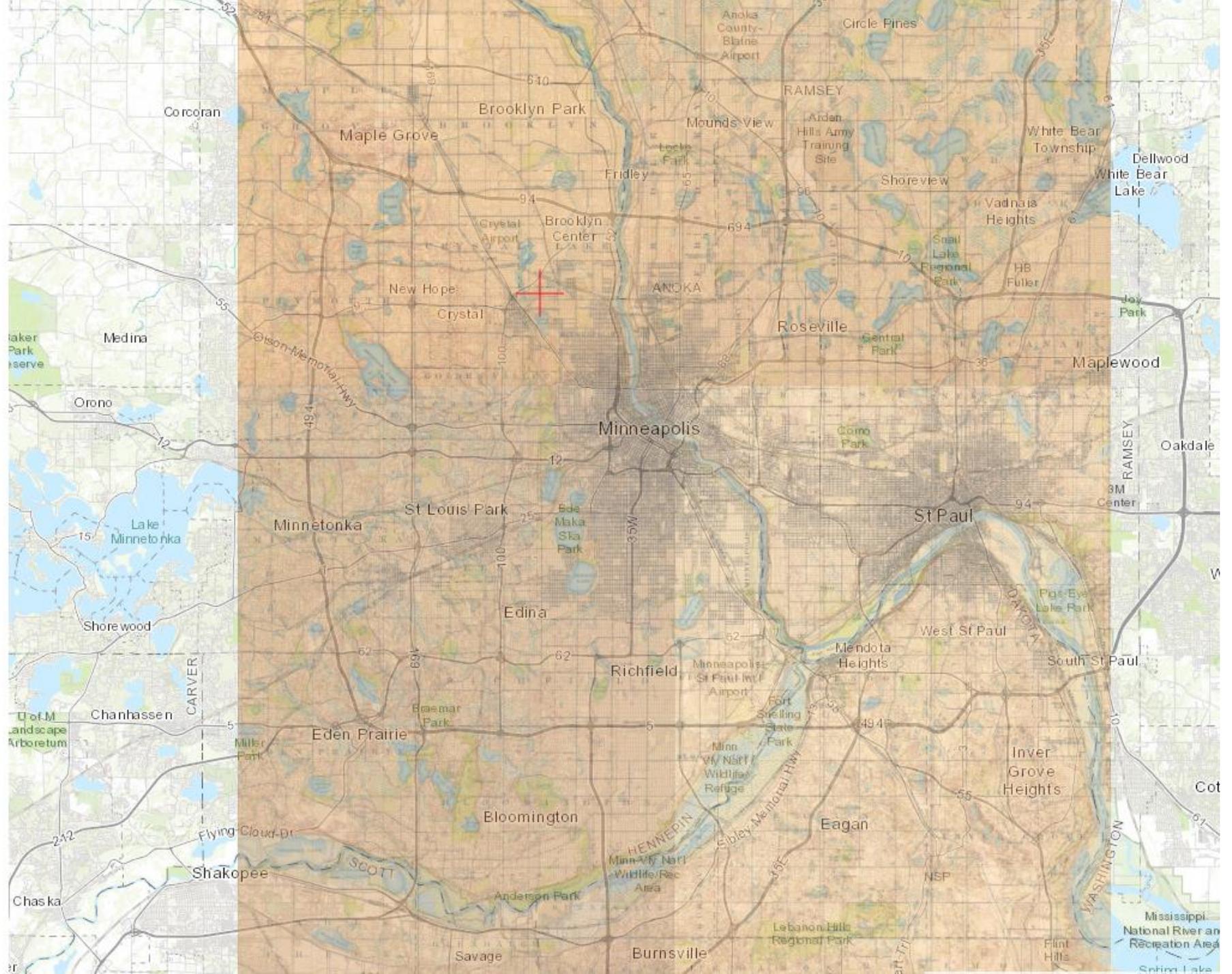
White Bear
1902
[download map](#)



Minneapolis
1896
[download map](#)



St Paul
1896
[download map](#)



USDA Web Soil Survey



USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Home About Soils Help Contact Us

You are here: Web Soil Survey Home

The simple yet powerful way to access and use soil data.

START WSS

Welcome to Web Soil Survey (WSS)

Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural

I Want To...

- **Start Web Soil Survey (WSS)**
- **Know Web Soil Survey Requirements**
- **Know Web Soil Survey operation hours**
- **Find what areas of the U.S. have soil data**
- **Find information by topic**

Search

Enter Keyword

All NRCS Sites ▾

Browse by Subject

- **Soils Home**
- **National Cooperative Soil Survey (NCSS)**
- **Archived Soil Surveys**



Area of Interest Interactive Map



View Extent ▾

Scale ▾



	0 percent slopes		
D64B	Urban land-Hubbard complex, Mississippi River Valley, 0 to 8 percent slopes	312.6	8.9%
D67A	Hubbard loamy sand, 0 to 2 percent slopes	531.5	15.1%
D67B	Hubbard loamy sand, 1 to 6 percent slopes	470.0	13.3%
D67C	Hubbard loamy sand, 2 to 12 percent slopes	65.6	1.9%
I 32F	Hawick loamy	13.2	0.4%



Report — Map Unit Description

Hennepin County, Minnesota

D67A—Hubbard loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w0mk
 Elevation: 660 to 1,710 feet
 Mean annual precipitation: 25 to 33 inches
 Mean annual air temperature: 37 to 48 degrees F
 Frost-free period: 120 to 170 days
 Farmland classification: Not prime farmland

Map Unit Composition

Hubbard and similar soils: 90 percent
 Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hubbard

Setting

Landform: Flats, stream terraces
 Landform position (three-dimensional): Tread, talf
 Down-slope shape: Linear
 Across-slope shape: Linear
 Parent material: Sandy outwash

Typical profile

Ap - 0 to 8 inches: loamy sand
 AB - 8 to 20 inches: loamy sand
 Bw - 20 to 32 inches: loamy sand
 C - 32 to 79 inches: sand

Properties and qualities

Slope: 0 to 2 percent
 Depth to restrictive feature: More than 80 inches
 Drainage class: Excessively drained
 Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 59.98 in/hr)
 Depth to water table: More than 80 inches
 Frequency of flooding: None
 Frequency of ponding: None
 Calcium carbonate, maximum content: 15 percent
 Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
 Available water supply, 0 to 60 inches: Low (about 3.9 inches)



Area of Interest (AOI)

Soil Map

Soil Data Explorer

Download Soils Data

Shopping Cart (Free)



Download Soils Data for...



Your AOI (SSURGO)



Create Download Link ?

General Information

Link [Description of Soil Survey Geographic \(SSURGO\) Database](#)

Download Contents Tabular data, spatial data (if available), thematic map data, template database, and FGDC metadata

Spatial Data Format ESRI Shapefile, Geographic WGS84

Soils Data Download Package for your AOI (SSURGO)

AOI Location

Hennepin County, Minnesota

Soil Survey Areas

Hennepin County, Minnesota (MN053)

Area in AOI

3,523 acres

Data Availability

Tabular and Spatial, complete

Version

Survey Area: Version 18, Sep 6, 2022

Tabular: Version 16, Sep 6, 2022

Spatial: Version 6, Sep 16, 2019

Template Database

State: MN

Microsoft Access Version: Access 2003

Template Database Version: 36

Template Database Name: soildb_MN_2003

Download Size

—

Download Link

Press **Create Download Link** to create a soils data download package for your Area of Interest.

Create Download Link

spatial	File folder	
tabular	File folder	
thematic	File folder	
readme.txt	Text Document	6 KB
soil_metadata_mn053.txt	Text Document	16 KB
soil_metadata_mn053.xml	Microsoft Edge HTML Do...	16 KB
soildb_MN_2003.mdb	Microsoft Access Database	2,179 KB

National Geologic Map Database



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The National Geologic Map Database

Developing a distributed archive of standardized geoscience information for the nation.

Map Catalog

Find over 100,000 products from over 600 publishers



Stratigraphy

Find geologic names, charts, and guidelines



MapView

Discover geologic maps through our map interface



TopoView

Access the Historical Topographic Map Collection



Standards & Guides

Resources for Creating Geologic Maps and Reports



Geologic Map Schema

GeMS - Database Schema for Digital Geologic Maps



MapView Beta by the NGMDB

MapView lets you explore some of our favorite geologic maps from the NGMDB (USGS/AASG). Note this interface is in beta, so feel free to send us any [comments](#), [bug reports](#), and [suggestions](#) as we continue to improve the interface.

25,847 maps on screen ([get full citation list](#))

Near: Beattie, KS, 66406 (Lng: -96.429, Lat: 39.887)

Filter Maps by the Following Scale Bin

All 500K 250K 125K 100K 62K 48K 24K

Promote Maps by: Selected Bedrock Surficial

Selected Geologic Maps Here (NGMDB Map Catalog)

Filter results by title or author keyword

Sync Record Table Returns with Selected Scale Bin

Title Author Agency Year Scale

Showing 1-50 of 25,847 records.

Cyr, A.J. and Miller, D.M., 2023, Preliminary surficial geologic map of Leuhman Ridge and the surrounding area, Edwards Air Force Base and Air Force Research Laboratory, Kern and San Bernardino Counties, California, U.S. Geological Survey, Open-File Report OF-2023-1014, 1:18,000. **Surf** **GIS**

Darin, M.H. and Demircan, B., 2023, Geologic map of the Boulder Canyon quadrangle, Clark County, Nevada, Nevada Bureau of Mines and Geology, Open File Report 2023-03, 1:24,000. **Bed** **Surf**

GIS **In View**

Page, W.R., Bultman, M.W., Berry, M.E., Turner, K.J., Menges, C.M., Gray, F., Paces, J.B., VanSistine, D.P., Morgan, L.E., and Havens, J.C., 2023, Geologic map and hydrogeologic investigations of the upper Santa Cruz River basin, southern Arizona, U.S. Geological Survey, Scientific Investigations Map SIM-3490, 1:50,000. **Bed**

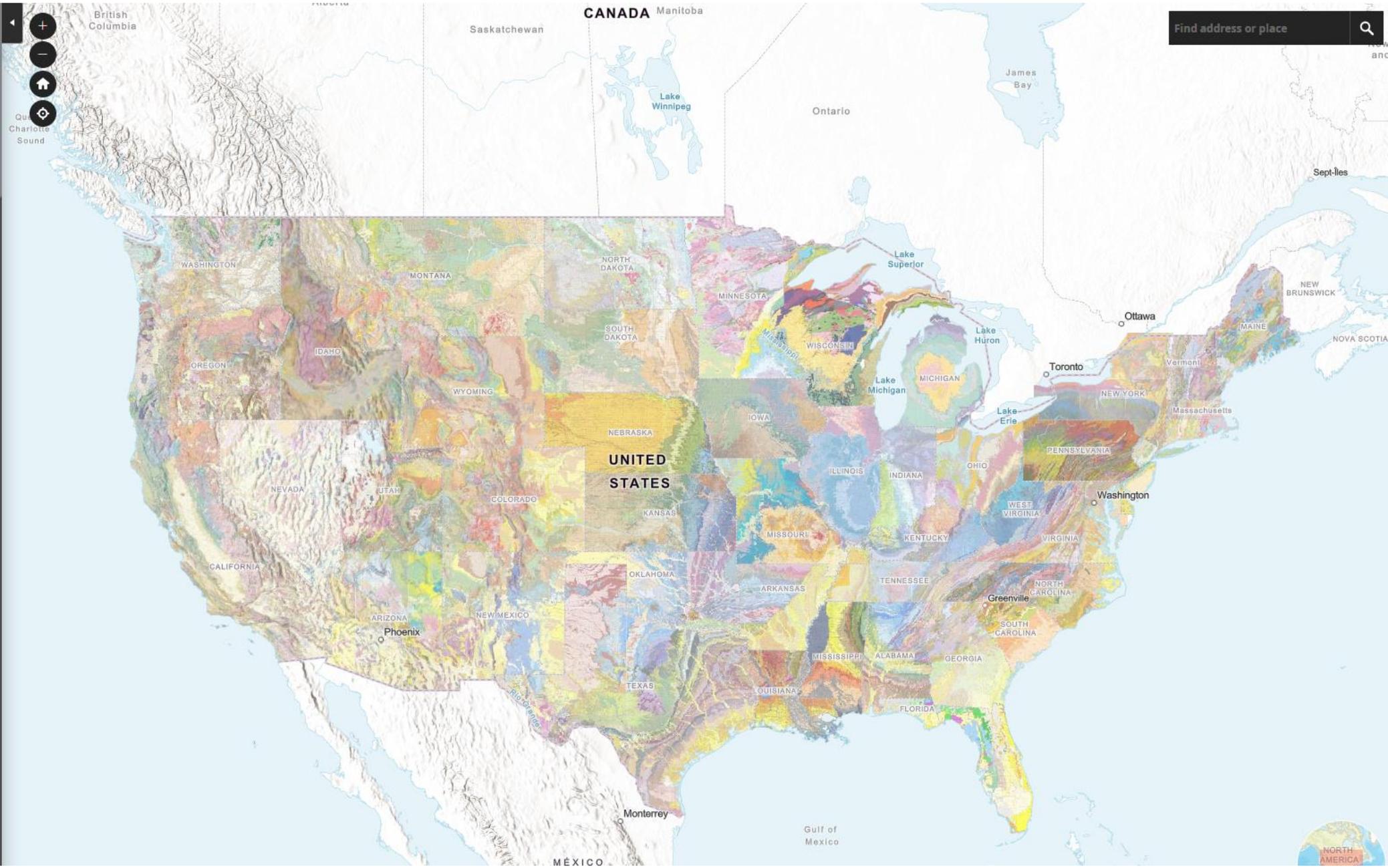
GIS **In View**

Tomlinson, J.L. and Ramsey, K.W., 2023, Geologic map of the Elkton, Saint Georges, and Delaware City quadrangles, Delaware, Delaware Geological Survey, Geologic Map Series 27, 1:24,000. **Surf**

GIS

Peterson, A.E., 2022, Preliminary surficial geology of the Cowley County portion of the Atlanta quadrangle, Kansas, Kansas Geological Survey, Open-file Report OFR 2022-16, 1:24,000. **Surf**

Layzell, A.L., 2022, Preliminary surficial geology of the Sumner County portion of the Millerton quadrangle, Kansas, Kansas Geological Survey, Open-file Report OFR 2022-14, 1:24,000. **Surf**



Find address or place



MapView lets you explore some of our favorite geologic maps from the NGMDB (USGS/AASG). Note this interface is in beta, so feel free to send us any [comments](#), [bug reports](#), and [suggestions](#) as we continue to improve the interface.

2 maps at this point (Get full citation list)

Near: Minneapolis, MN, 55450 (Lng: -93.222, Lat: 44.881, Elev: 820)

Filter Maps by the Following Scale Bin

- All
- 500K
- 250K
- 125K
- 100K
- 62K
- 48K
- 24K

Promote Maps by: Selected Bedrock Surficial

Selected Geologic Maps Here (NGMDB Map Catalog)

Filter results by title or author keyword

Sync Record Table Returns with Selected Scale Bin

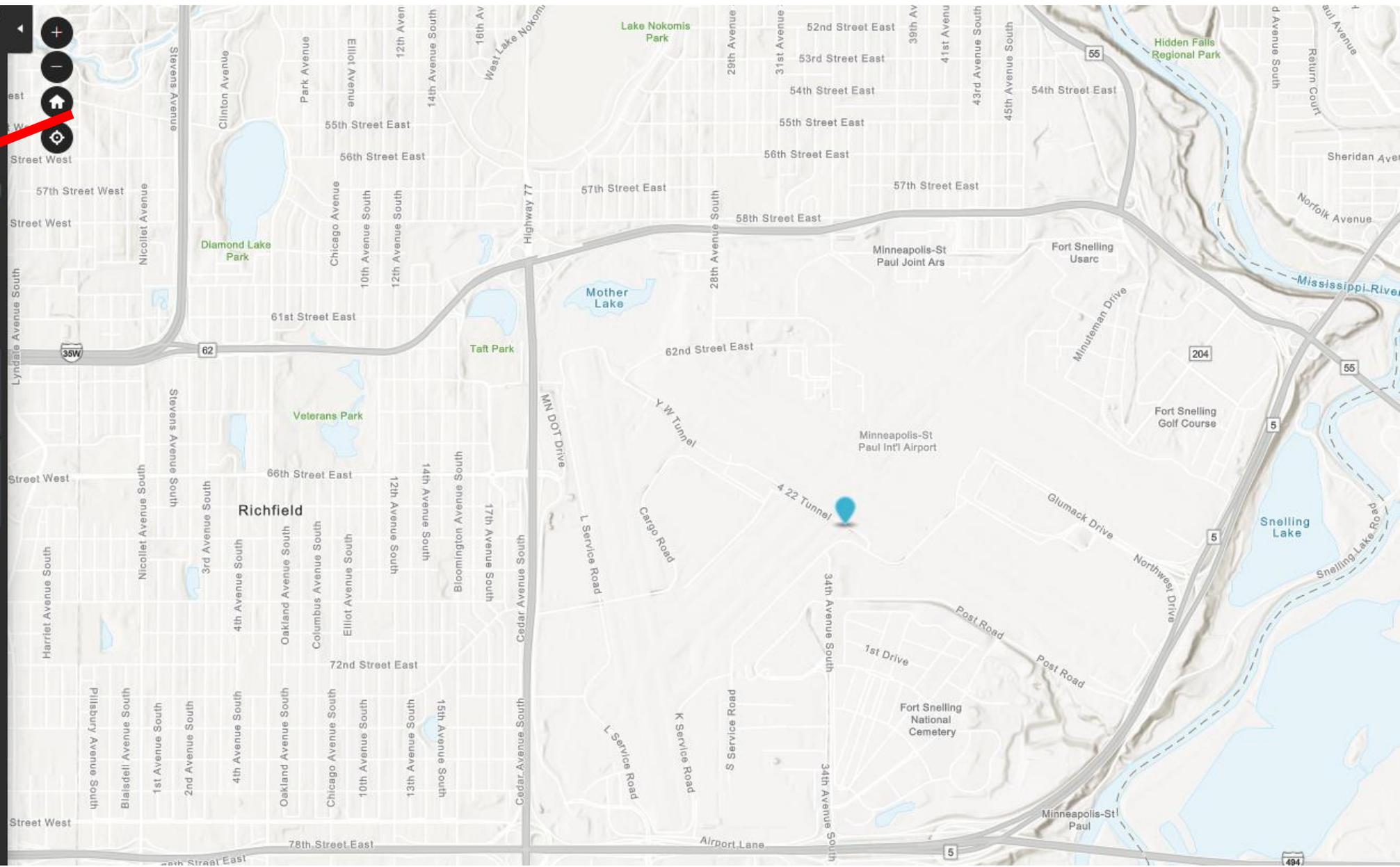
- Title
- Author
- Agency
- Year
- Scale

Schwartz, G.M., 1936, *The geology of the Minneapolis-St. Paul metropolitan area, Minnesota* Geological Survey, Bulletin 27, 1:96,000. **Bed**

Surf

Sardeson, F.W., 1916, *Minneapolis-St. Paul folio, Minnesota, U.S. Geological Survey, Geologic Atlas of the United States Folio GF-201, 1:62,500.* **Bed**

Surf

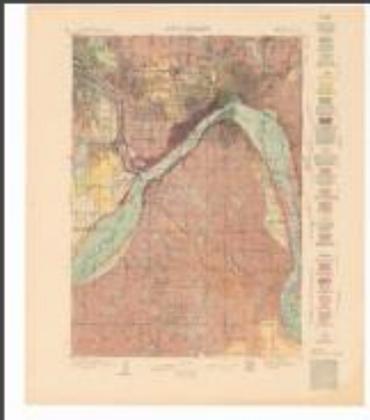


Sardeson, F.W., 1916, **Minneapolis-St. Paul folio, Minnesota, U.S. Geological Survey, Geologic Atlas of the United States Folio GF-201, 1:62,500.** **Bed**



8

Surf



More Info



Go To

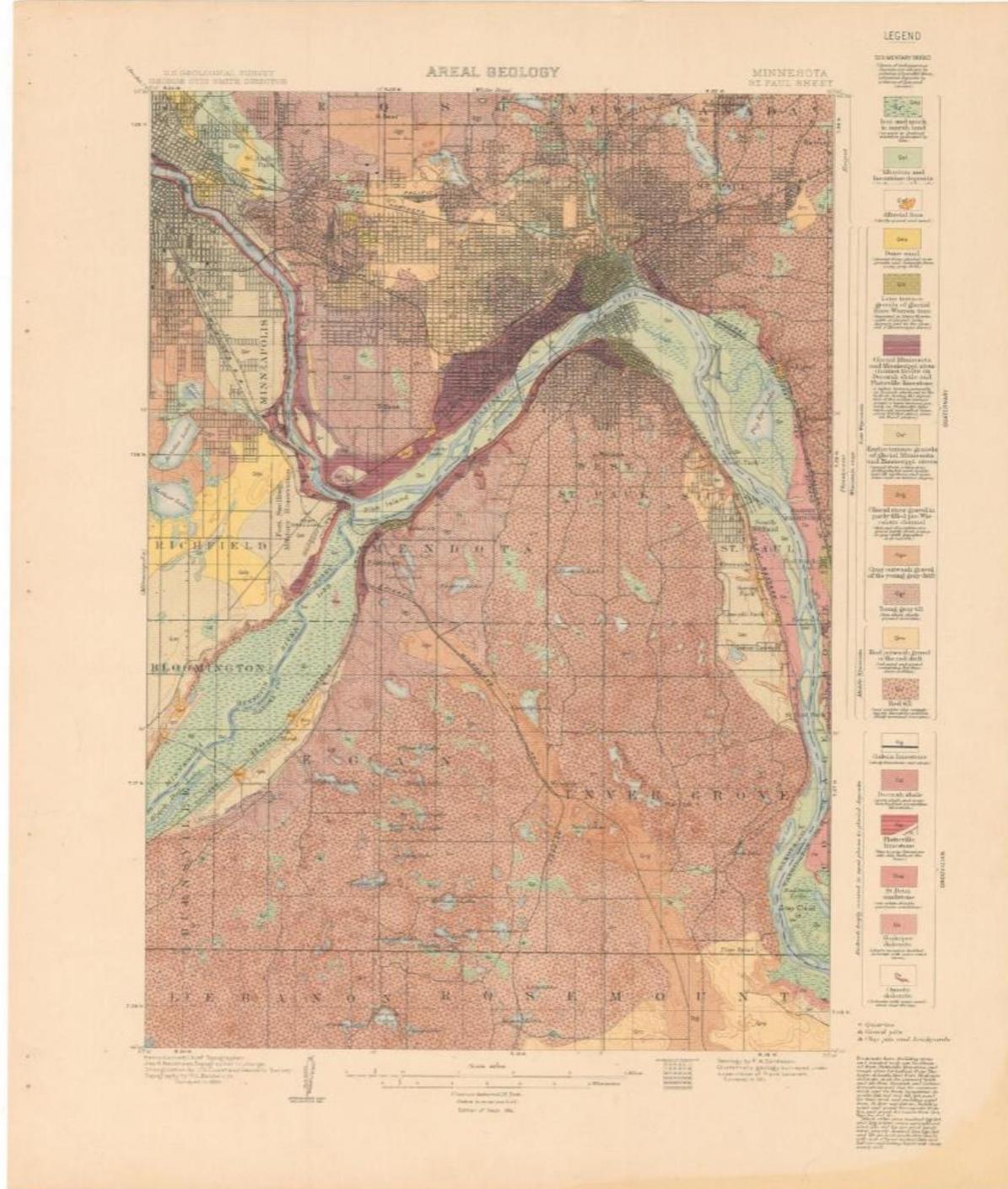


Inspect

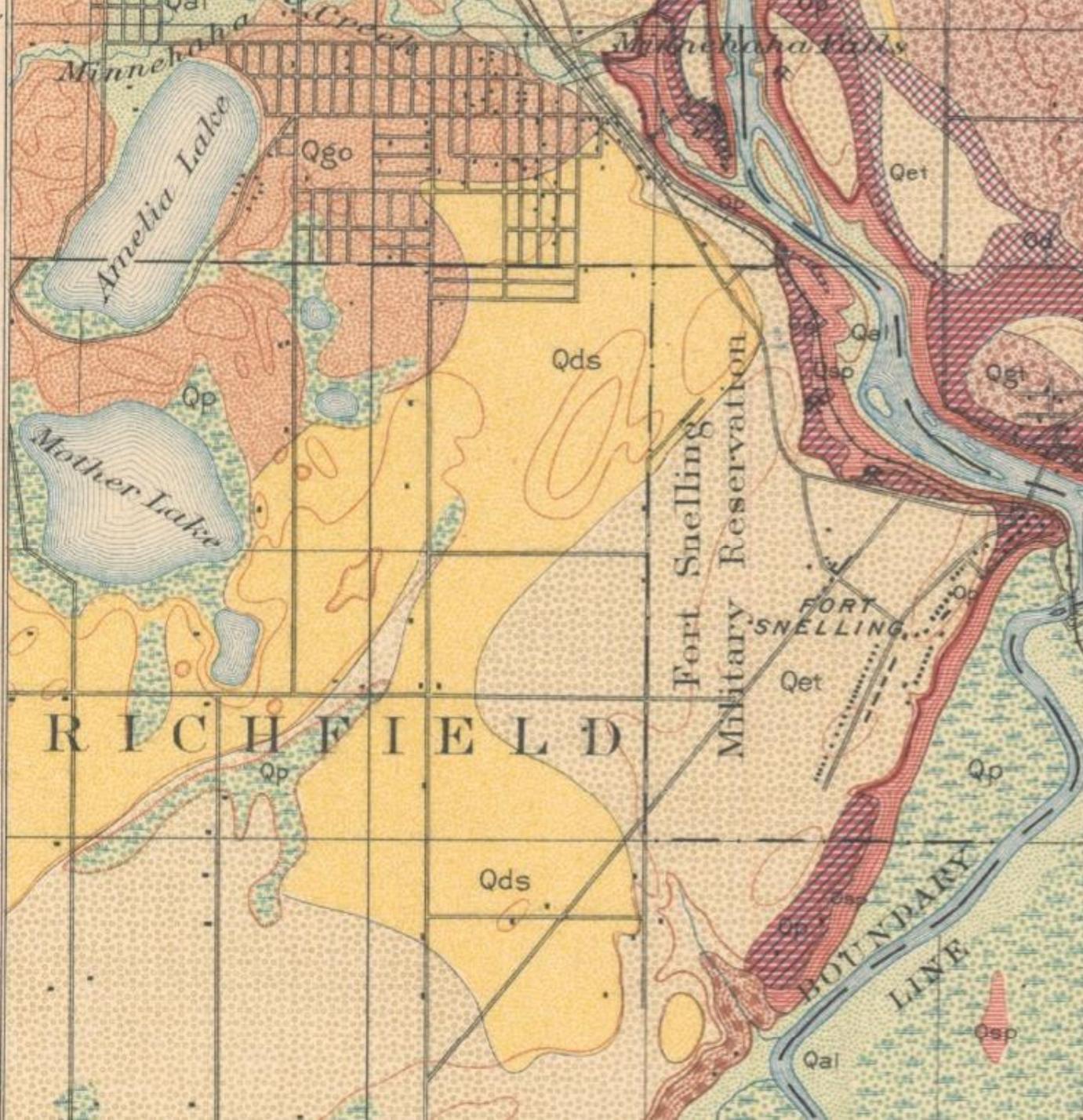


Comment

Image 4 of 8 – Areal Geology (St. Paul sheet)



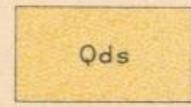
55'
T.28 N.



(Minneapolis)

Pleistocene
Wisconsin stage

Late Wisconsin



Qds

Dune sand
(derived from glacial river gravels and outwash from young gray drift.)

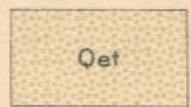


Qlt

Later terrace gravels of glacial River Warren time
(deposited in River Warren outlet of glacial Lake Agassiz and in the channel of Mississippi River)



Glacial Minnesota and Mississippi river channel floors on Decorah shale and Platteville limestone
(a higher terrace, generally on Decorah shale, cut in the bedrocks during the deposition of the earlier terrace gravel, a lower terrace, generally on Platteville limestone, cut somewhat later, about 100 feet above present flood plains)



Qet

Earlier terrace gravels of glacial Minnesota and Mississippi rivers
(issued from young gray drift, includes some nearly bare all surfaces and some later wash on terrace slopes)



Qrg

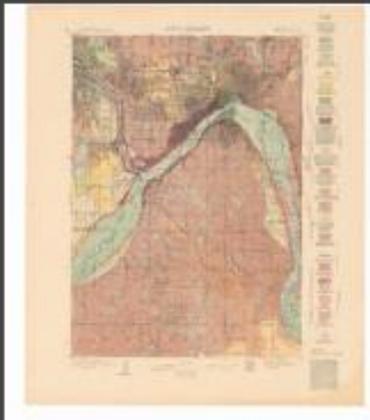
Glacial river gravel in partly filled pre-Wisconsin channel
(derived from glacial river gravels and outwash from young gray drift.)

QUATERNARY

Sardeson, F.W., 1916, **Minneapolis-St. Paul folio, Minnesota**, U.S. Geological Survey, *Geologic Atlas of the United States Folio GF-201*, 1:62,500. **Bed**



Surf



More Info



Go To



Inspect



Comment

Image 4 of 8 – Areal Geology (St. Paul sheet)

National Geologic Map Database

Product Description Page

General Information

Title: Minneapolis-St. Paul folio, Minnesota

Author(s): Sardeson, F.W.

Publishing Organization: [U.S. Geological Survey](#)

Series and Number: Geologic Atlas of the United States Folio GF-201

Publication Date: 1916

Map Scale: 1:62,500

Cross Section: None

North Latitude: 45° 15' 0" N (45.2500)

South Latitude: 44° 45' 0" N (44.7500)

East Longitude: 93° 0' 0" W (-93.0000)

West Longitude: 93° 30' 0" W (-93.5000)

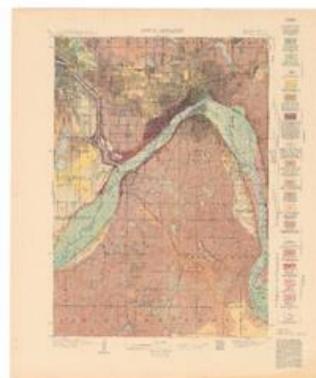
[Corrections to this entry?](#)



* See base map disclaimer below.

Find more maps in this area with [mapView](#)

Map Preview (Click image to enlarge)



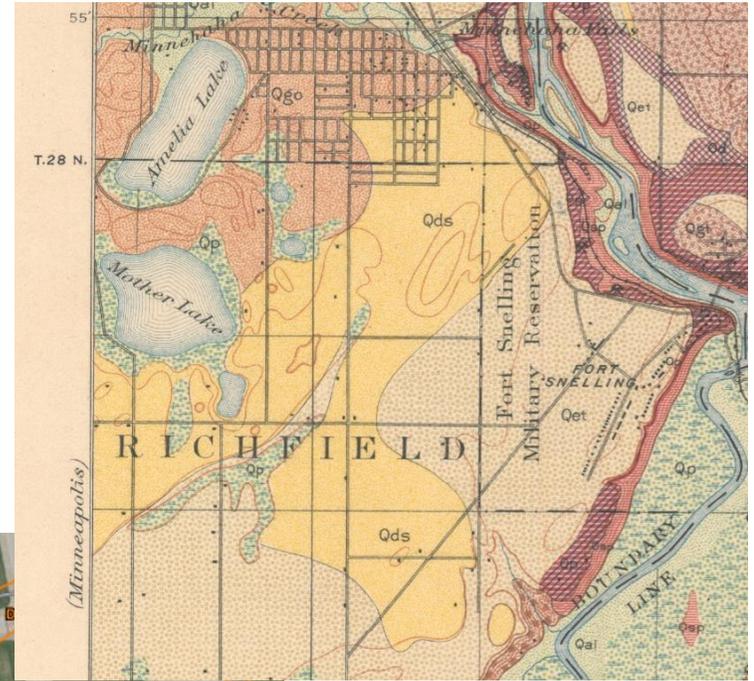
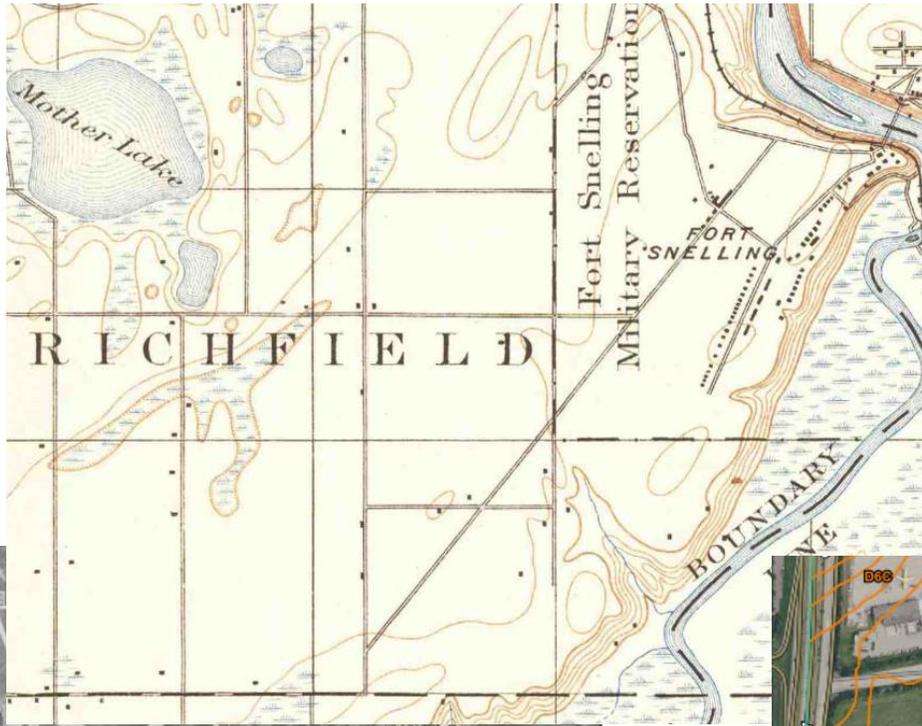
Downloads from the NGMDB

Select an image from the Map Preview section and choose a download option below

-  [Print Optimized PDF](#) (5Mb)
-  [Compressed GeoTiff](#) (8Mb)
-  [Browse Graphic \(JPG\)](#) (496K)
-  [Google Earth KMZ](#) (3Mb)

NOTE: Images shown may not constitute the entire publication, see below for publisher links.

Image 4 of 8 — Areal Geology (St. Paul sheet)



USGS Streamer



USGS

Streamer

Welcome to Streamer!
Explore America's larger streams as you trace upstream to their source or downstream to where they empty.

Learn more about your stream traces and the places they pass through in brief or detailed reports.

See weather radar and near real-time streamflow conditions.

Getting started with Streamer is as easy as following these quick instructions to the right.

Do not show this at startup

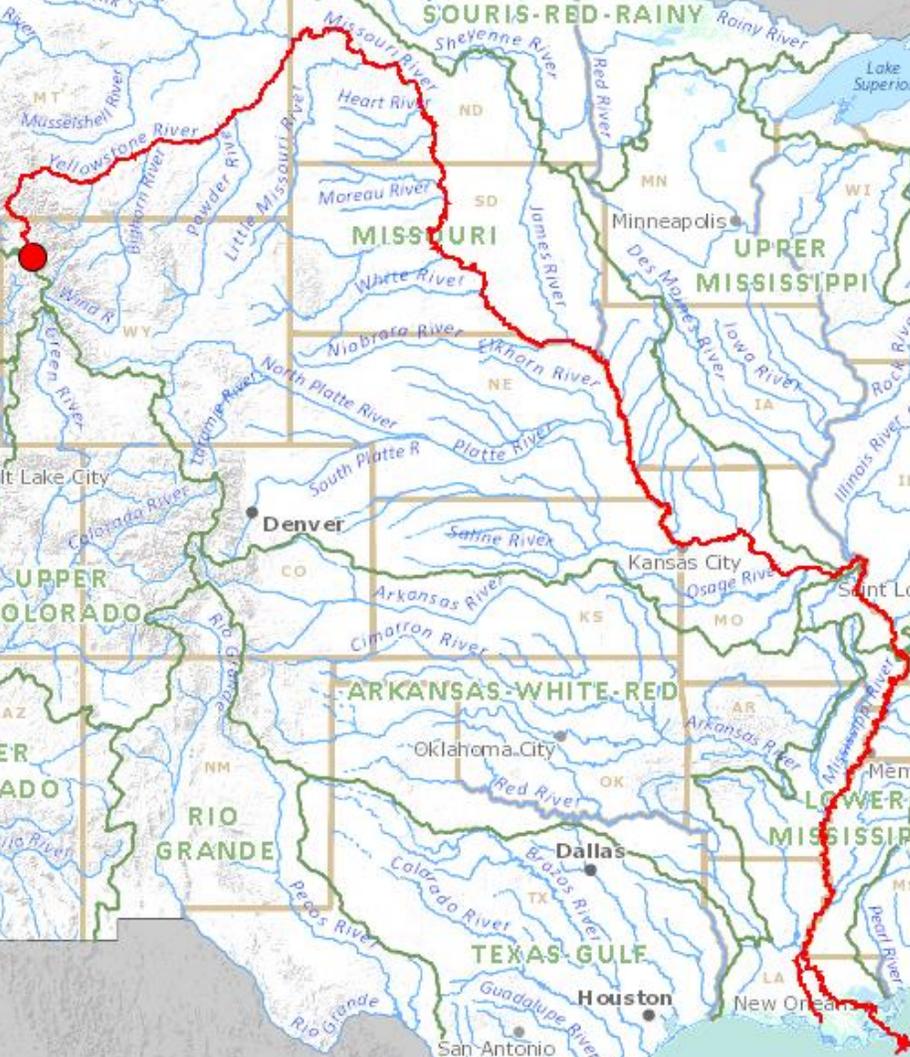
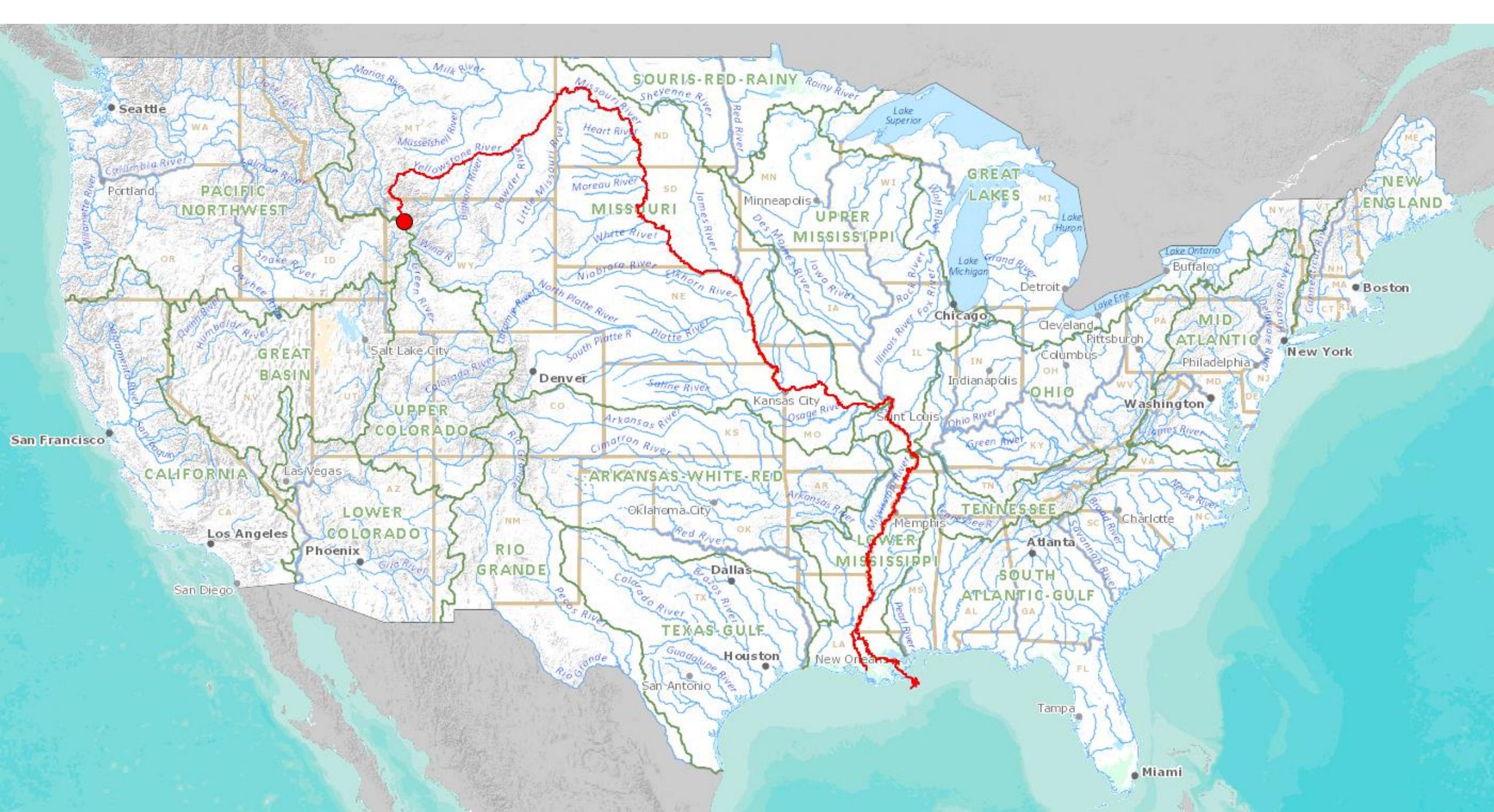
- 1** Zoom in to activate trace buttons
double click!

- 2** Click on a trace button

- 3** Click on a stream

- 4** Click **Map Contents** for more map layers


Go To Map ▶





US Census – Flows Mapper

Census Flows Mapper

[View County Statistics](#) [View Data Table](#) [About This Map](#) [FAQ](#) [Toggle Cities](#)

Search for a county or click on the map

Choose a dataset
2016–2020

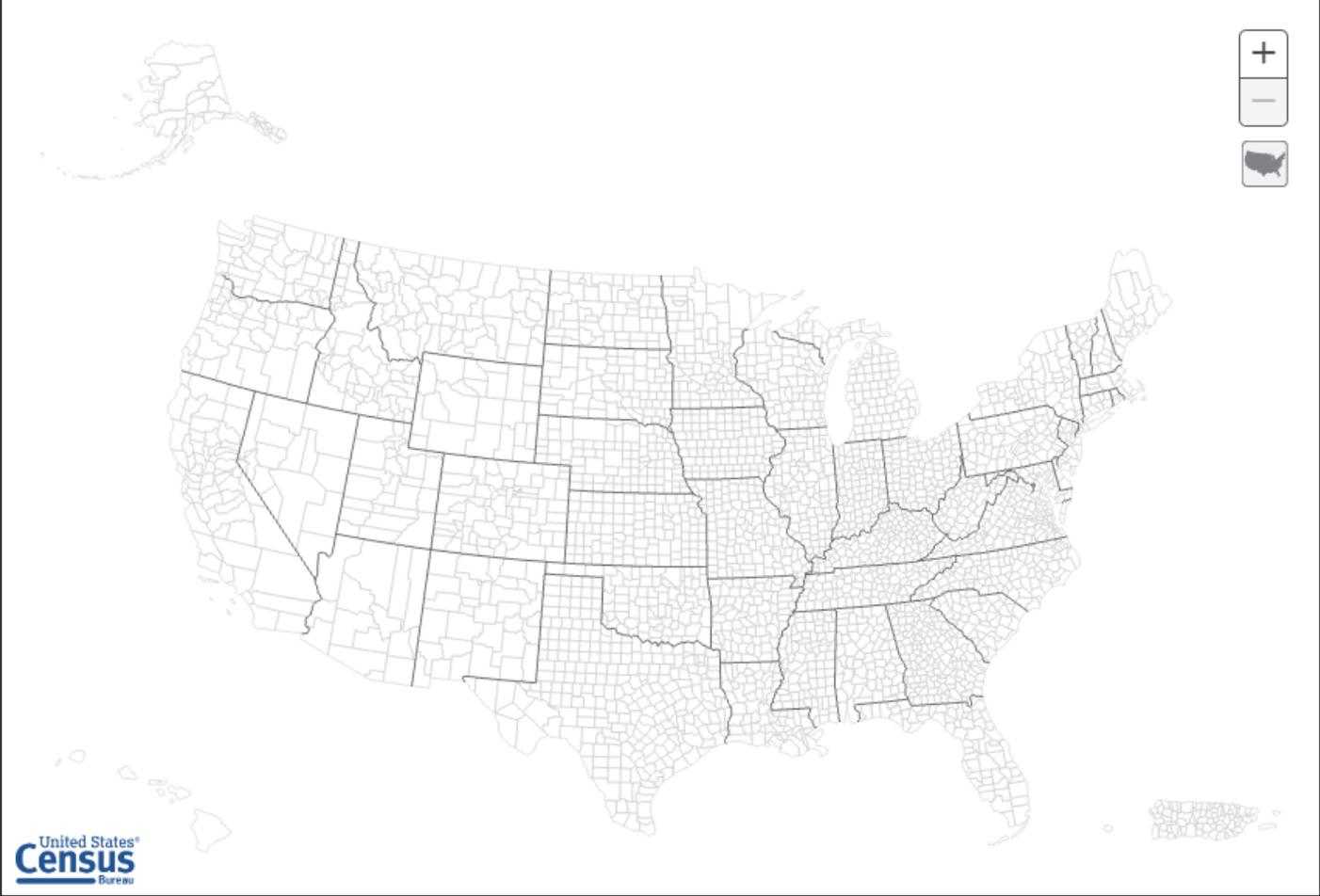
Choose a type of migration flow
 Net Outbound Inbound

Choose a characteristic
Total

Choose a color palette
Orange/Blue

Choose a classification type
Natural Breaks

Select flow by number of movers



United States
Census
Bureau

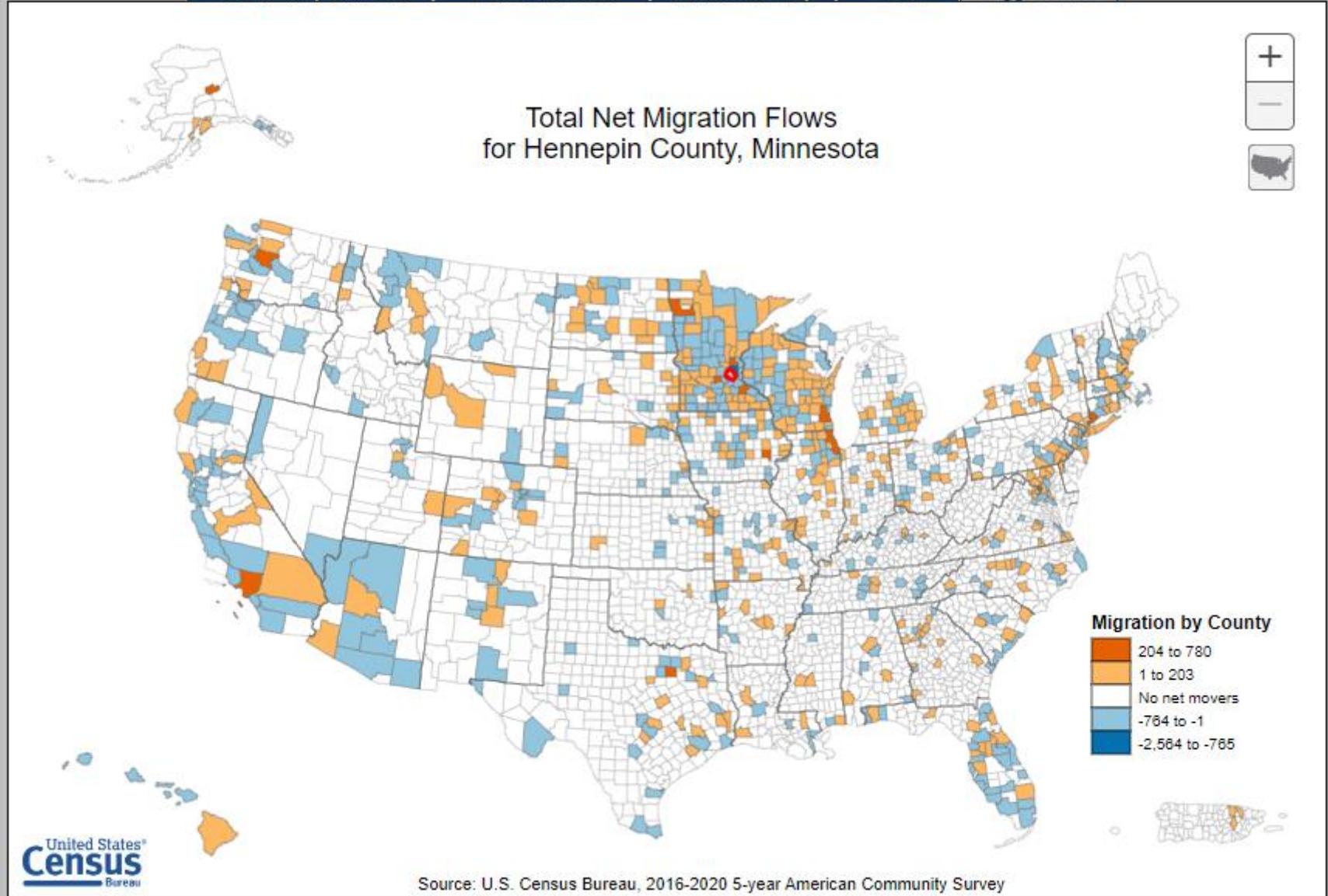
[View County Statistics](#)

[View Data Table](#)

[About This Map](#)

[FAQ](#)

[Toggle Cities](#)



County Statistics (2016-2020)**Hennepin County, Minnesota***Population (1 yr and over): 1,239,863**Movers from a different state: 32,696**Movers to a different state: 31,998**Movers from a different county, same state: 43,102**Movers to a different county, same state: 47,984**Movers from abroad: 9,168***Data Table for Hennepin County, Minnesota - Click on a record to zoom to that county**

Search by County Name:

Record Count: 762 records

[Export to CSV](#)

▲ State/County FIPS	State FIPS	County FIPS	County Name	State Name	Total	Margin of Error (+/-)
'01069'	'01'	'069'	Houston County	Alabama	-4	6
'01073'	'01'	'073'	Jefferson County	Alabama	46	48
'01089'	'01'	'089'	Madison County	Alabama	-36	39
'01101'	'01'	'101'	Montgomery County	Alabama	23	46

[View County Statistics](#)

[View Data Table](#)

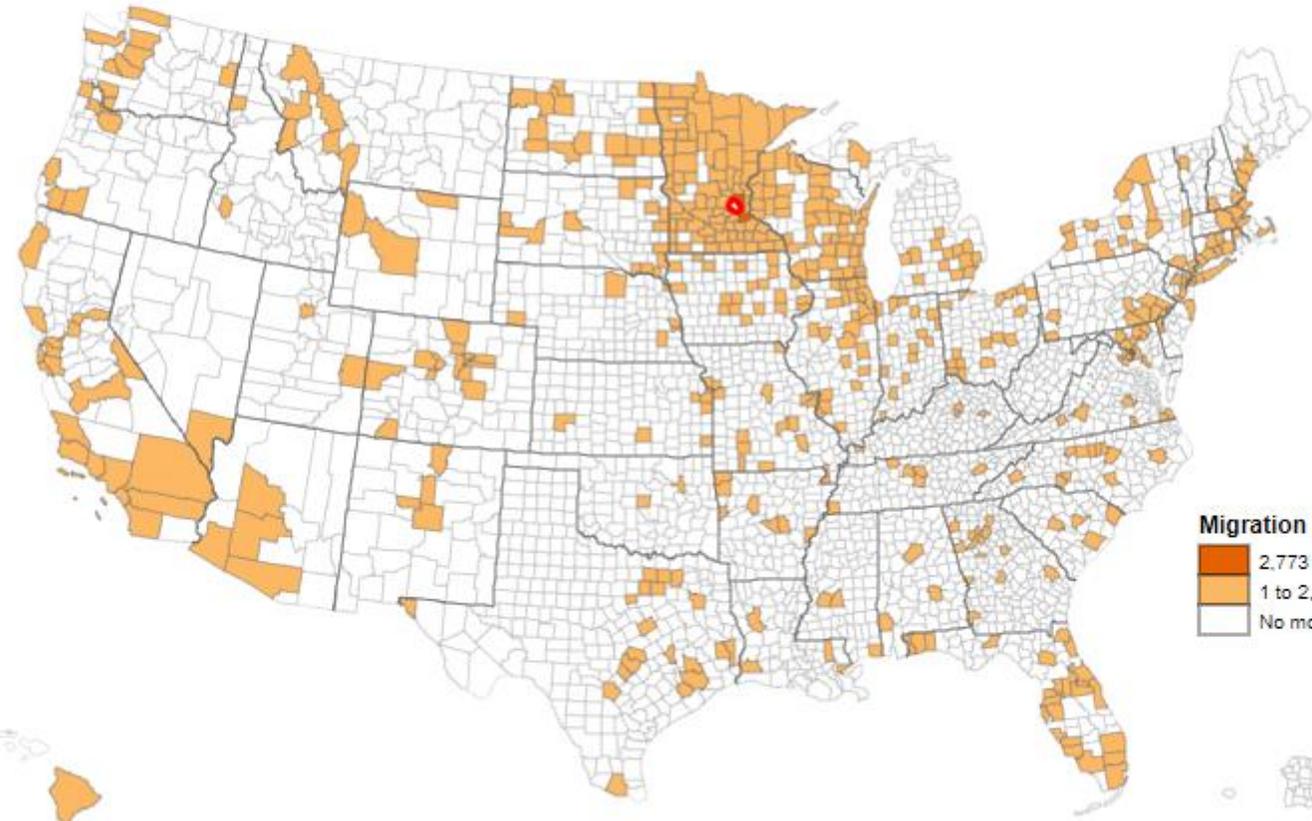
[About This Map](#)

[FAQ](#)

[Toggle Cities](#)



Total Inbound Migration Flows for Hennepin County, Minnesota



Migration by County
2,773 to 11,373
1 to 2,772
No movers



Source: U.S. Census Bureau, 2016-2020 5-year American Community Survey

US Census - OnTheMap

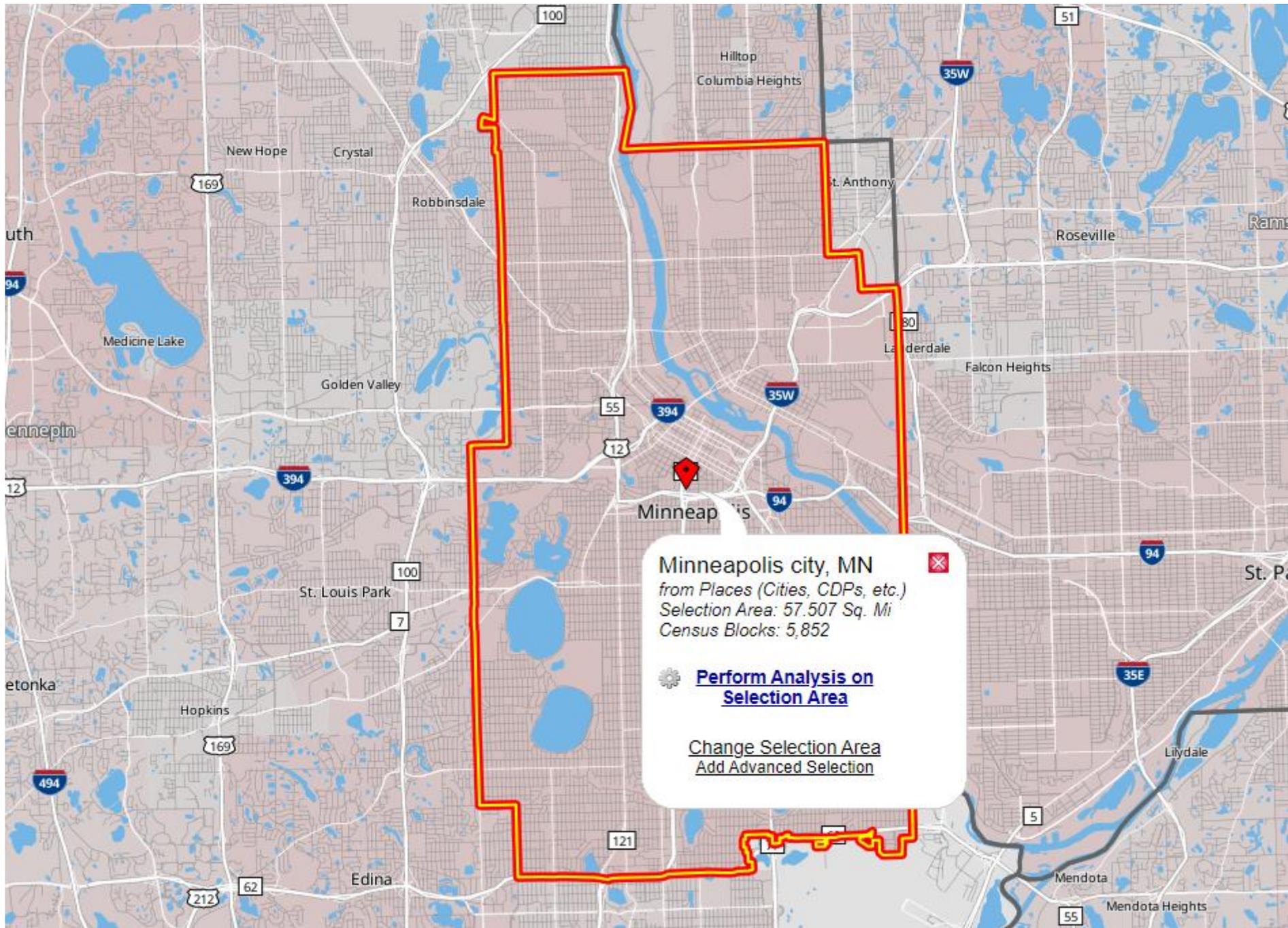
The screenshot displays the 'United States Census Bureau OnTheMap' web application. The interface is divided into a control panel on the left and a map area on the right.

Control Panel (Left):

- Navigation:** 'Start', 'Base Map', and 'Selection' tabs.
- Welcome to OnTheMap!**
 - Start an analysis by using one of the tools below (Search, Import Geography, or Load .OTM file). Hover over the Help icons located throughout the application to see Help tips for using specific functionality. Sections in the control panel can be collapsed or opened by clicking the section title.
 - 2020 data now available!**
[Read New Data Notice \(4/4/2023\)](#)
- Search**
 - Search input field with a 'Search' button.
 - 'Search All Names' dropdown menu.
- Import Geography**
 - [Import from KML](#)
 - [Import from SHP](#)
 - [Import from GPS](#)
- Load .OTM File**
 - Text: 'Click the "Load" button below to load a .OTM file.'
 - 'Load' button.
- Previous Geographies**
 - Text: 'No Previous Shapes'

Map Area (Right):

- Map of the United States with state boundaries and major cities labeled: Seattle, Portland, San Jose, Las Vegas, Los Angeles, San Diego, Phoenix, El Paso, Denver, Dallas, Houston, Oklahoma City, Memphis, Chicago, Detroit, Columbus, Washington, Boston, New York, Charlotte, and Jacksonville.
- Map controls on the left: a compass, a zoom-in (+) button, a zoom-out (-) button, and a vertical zoom slider.
- Map navigation buttons at the top: 'Hide Tabs' and 'Previous Extent'.
- Utility buttons at the top right: 'Save', 'Load', and 'Contact'.



Minneapolis city, MN 
from Places (Cities, CDPs, etc.)
Selection Area: 57.507 Sq. Mi
Census Blocks: 5,852

 [Perform Analysis on Selection Area](#)

[Change Selection Area](#)
[Add Advanced Selection](#)

Analysis Settings

Distance/Direction Analysis in 2020 by Private Primary Jobs

Home/Work Area

Determines whether the selection area is analyzed on where workers live ("Home") or where workers are employed ("Work").

- Home
 Work



Analysis Type

Determines the type of results that will be generated for the selected area.

Area Profile

Labor Market Segment:

All Workers

Area Comparison

Areas to Compare:

Places (Cities, CDPs, etc.)

Labor Market Segment:

All Workers

Distance/Direction

Destination

Destination Type:

Places (Cities, CDPs, etc.)

Inflow/Outflow

Note: Home/Work choice does not affect results



Year

Determines the year(s) of data that will be processed in the analysis.

- 2020
 2019
 2018
 2017
 2016
 2015
 2014
 2013
 2012
 2011
 2010
 2009
 2008
 2007
 2006
 2005

Job Type

Determines the scope of jobs that will be processed in the analysis.

- All Jobs
 Primary Jobs
 All Private Jobs
 Private Primary Jobs

Cancel

 Go!

Start Base Map Selection Results

Distance/Direction Analysis

Work to Home

Display Settings

Labor Market Segment Filter

Year

Map Controls

Color Key

Thermal Overlay

Point Overlay

Selection Outline

Identify Zoom to Selection

Clear Overlays Animate Overlays

Report/Map Outputs

Detailed Report

Export Geography

Print Chart/Map

Legends

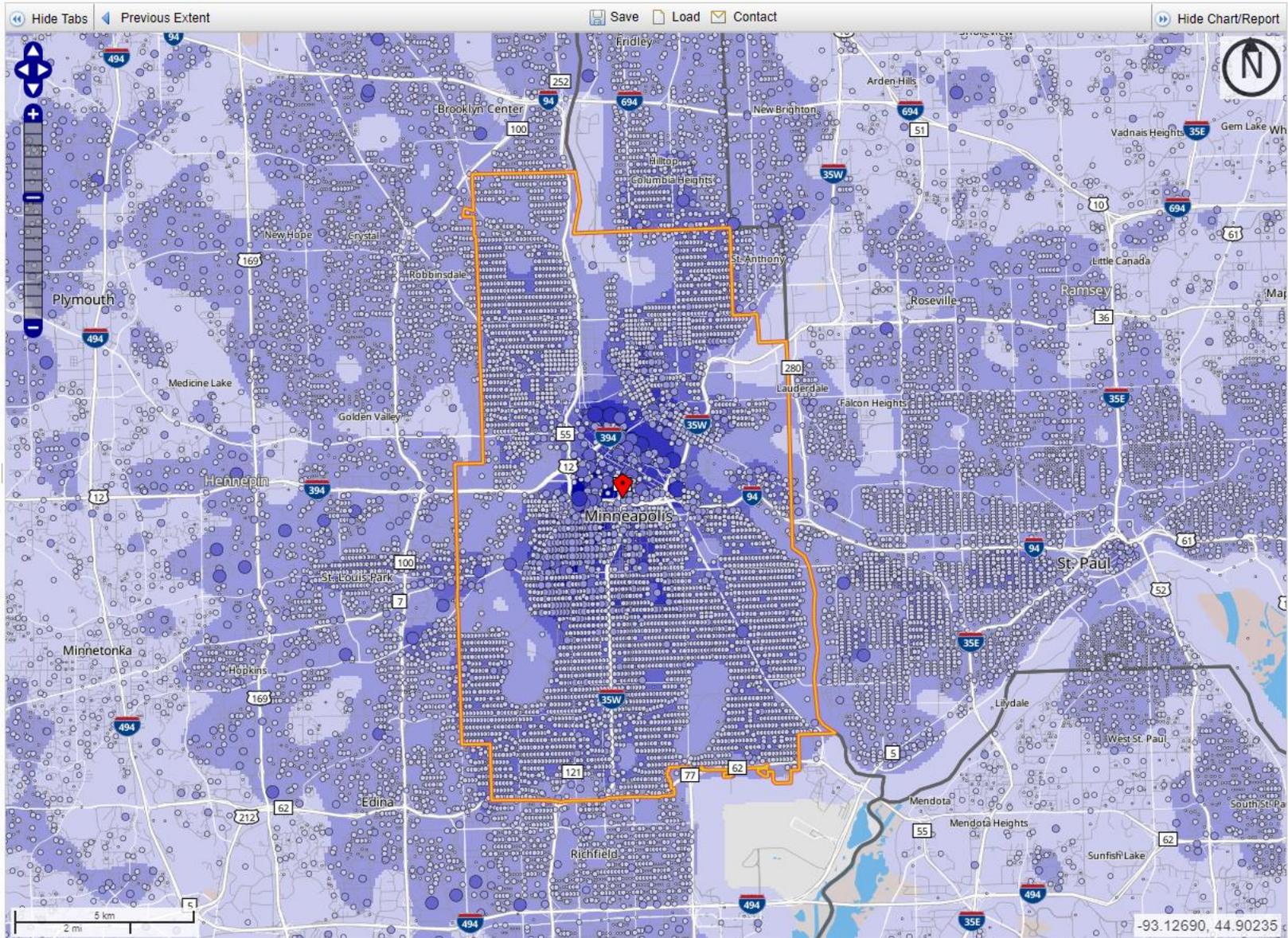
- 5 - 190 Jobs/Sq.Mile
- 191 - 745 Jobs/Sq.Mile
- 746 - 1,670 Jobs/Sq.Mile
- 1,671 - 2,965 Jobs/Sq.Mile
- 2,966 - 4,630 Jobs/Sq.Mile

- 1 - 3 Jobs
- 4 - 23 Jobs
- 24 - 75 Jobs
- 76 - 178 Jobs
- 179 - 347 Jobs

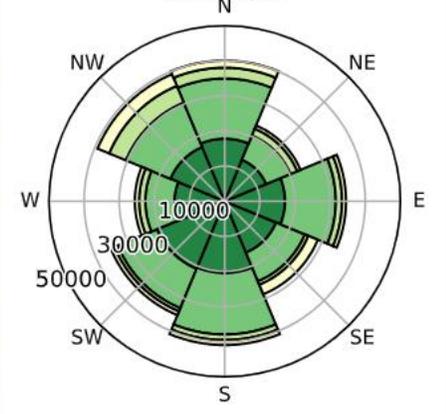
Work Area

Analysis Settings

[Change Settings](#)



Job Counts by Distance/Direction in 2020
All Workers



View as

Jobs by Distance - Work Census Block to Home Census Block

	2020	
	Count	Share
Total Private Primary Jobs	267,318	100.0%
<input checked="" type="checkbox"/> Less than 10 miles	135,849	50.8%
<input checked="" type="checkbox"/> 10 to 24 miles	99,577	37.3%
<input checked="" type="checkbox"/> 25 to 50 miles	17,547	6.6%
<input checked="" type="checkbox"/> Greater than 50 miles	14,345	5.4%

Start Base Map Selection Results

Distance/Direction Analysis

Home to Work

Display Settings

Labor Market Segment Filter: All Workers

Year: 2020

Map Controls

Color Key

Thermal Overlay

Point Overlay

Selection Outline

Identify Zoom to Selection

Clear Overlays Animate Overlays

Report/Map Outputs

Detailed Report

Export Geography

Print Chart/Map

Legends

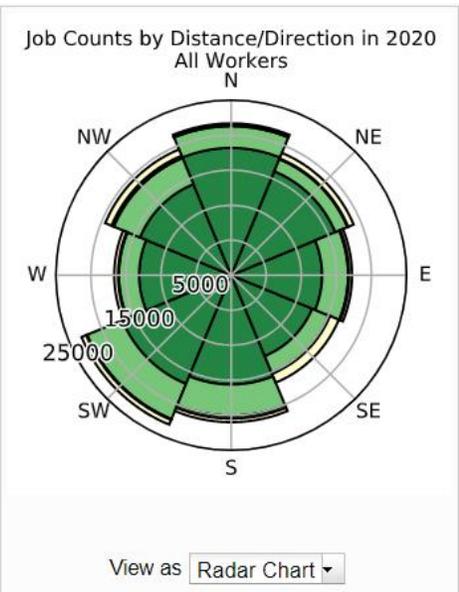
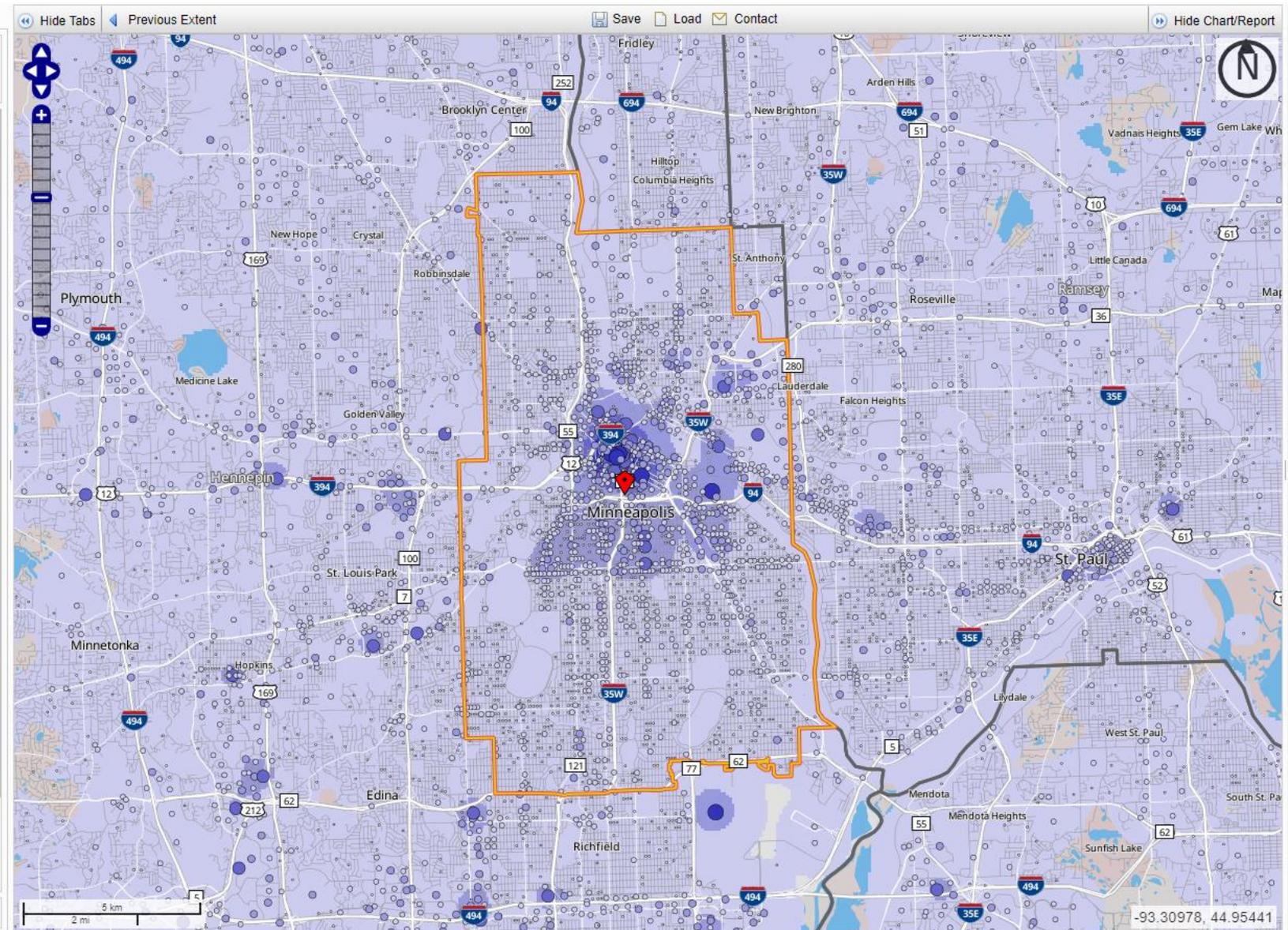
- 5 - 1,510 Jobs/Sq.Mile
- 1,511 - 6,025 Jobs/Sq.Mile
- 6,026 - 13,550 Jobs/Sq.Mile
- 13,551 - 24,085 Jobs/Sq.Mile
- 24,086 - 37,631 Jobs/Sq.Mile

- 1 - 5 Jobs
- 6 - 67 Jobs
- 68 - 335 Jobs
- 336 - 1,058 Jobs
- 1,059 - 2,582 Jobs

Home Area

Analysis Settings

[Change Settings](#)



Jobs by Distance - Home Census Block to Work Census Block

	2020	
	Count	Share
Total Private Primary Jobs	154,610	100.0%
Less than 10 miles	119,344	77.2%
10 to 24 miles	28,087	18.2%
25 to 50 miles	1,571	1.0%
Greater than 50 miles	5,608	3.6%

Start Base Map Selection Results

Inflow/Outflow Analysis

enter your own subtitle

▼ Display Settings

Labor Market Segment Filter All Workers

Year

▼ Map Controls

Color Key

Flow Overlay

Selection Outline

Identify Zoom to Selection

Clear Overlays Animate Overlays

▼ Report/Map Outputs

Detailed Report

Export Geography

Print Chart/Map

▼ Legends

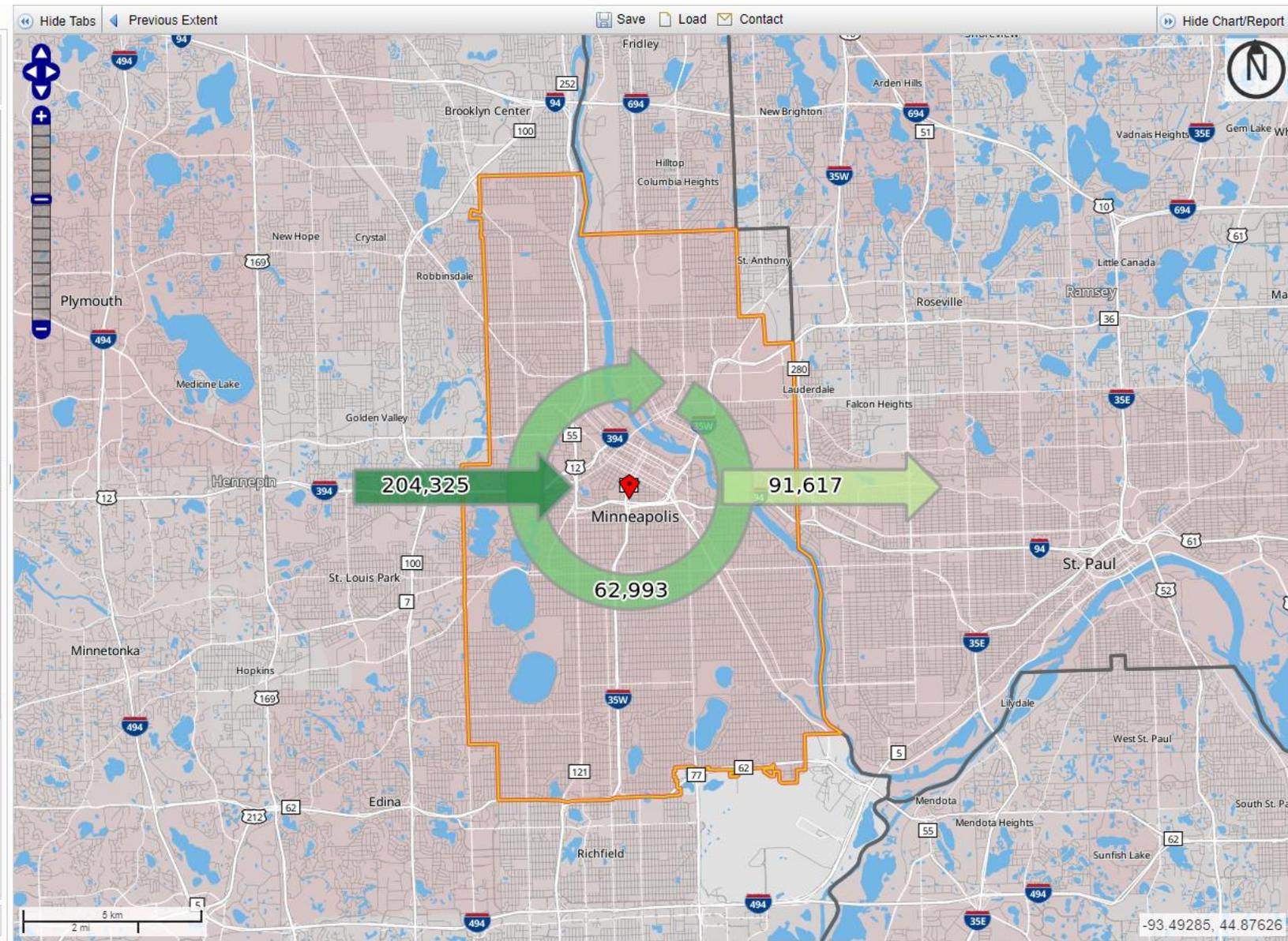
Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.

- Employed and Live in Selection Area
- Employed in Selection Area, Live Outside
- Live in Selection Area, Employed Outside

Selection Area

▼ Analysis Settings

Change Settings



Inflow/Outflow Job Counts in 2020

- 204,325 - Employed in Selection Area, Live Outside
- 91,617 - Live in Selection Area, Employed Outside
- 62,993 - Employed and Live in Selection Area

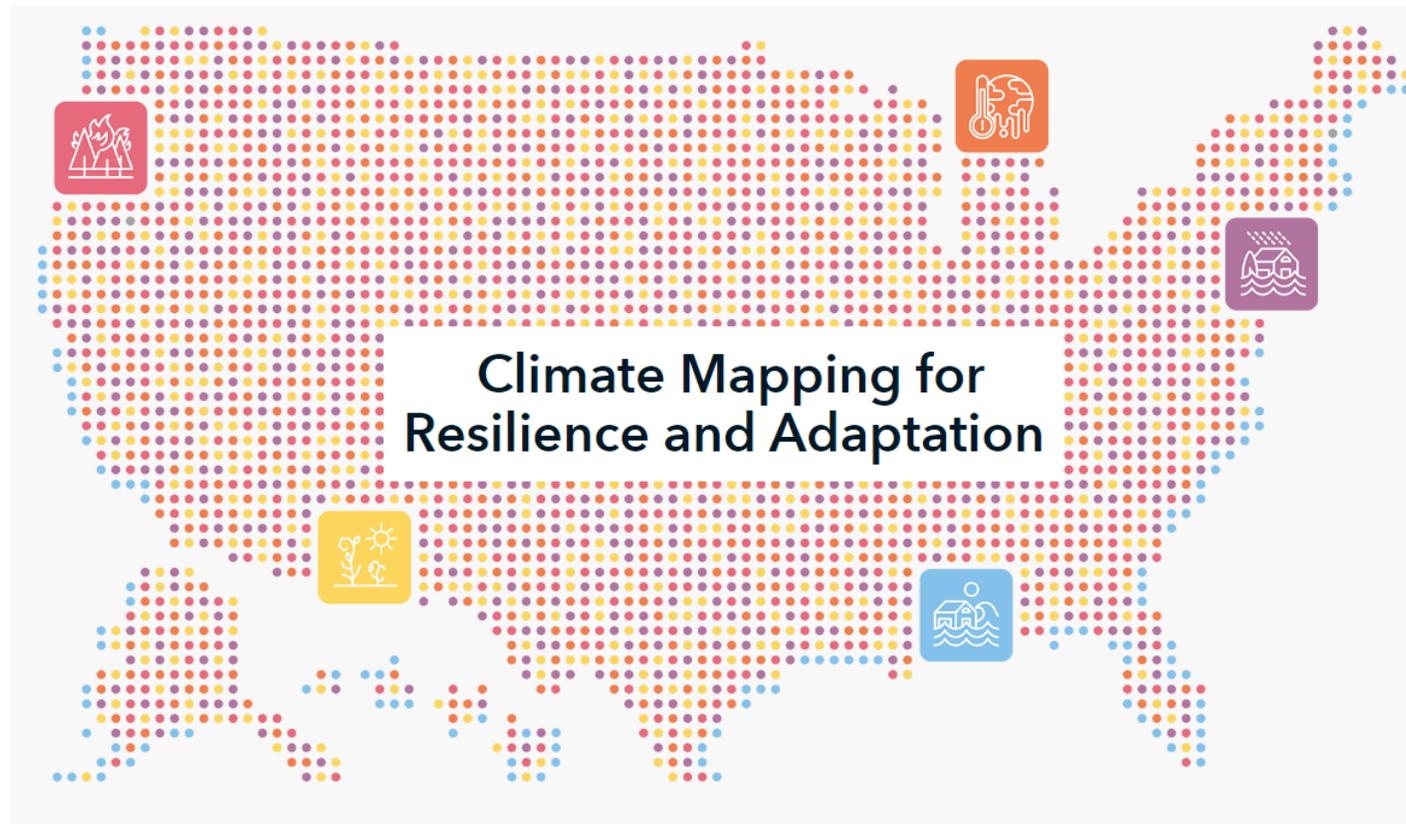
Inflow/Outflow Job Counts (Private Primary Jobs)

	2020	
	Count	Share
Employed in the Selection Area	267,318	100.0%
Employed in the Selection Area but Living Outside	204,325	76.4%
Employed and Living in the Selection Area	62,993	23.6%
Living in the Selection Area	154,610	100.0%
Living in the Selection Area but Employed Outside	91,617	59.3%
Living and Employed in the Selection Area	62,993	40.7%

[Reset Highlighting](#)

Climate Mapping for Resilience and Adaptation

“helps people assess their local exposure to climate-related hazards”

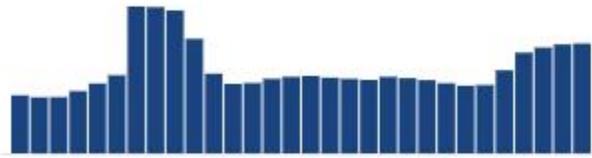


Wildfire

Active fires

492

Last 30 days



Source: National Interagency Fire Center

Current Incidents

Personnel Assigned



> 500



50-500



1-50



Unreported Personnel



Prescribed Fire

Current Perimeters

Category



Wildfire



Prescribed Fire

Today's Air Quality Index

Category

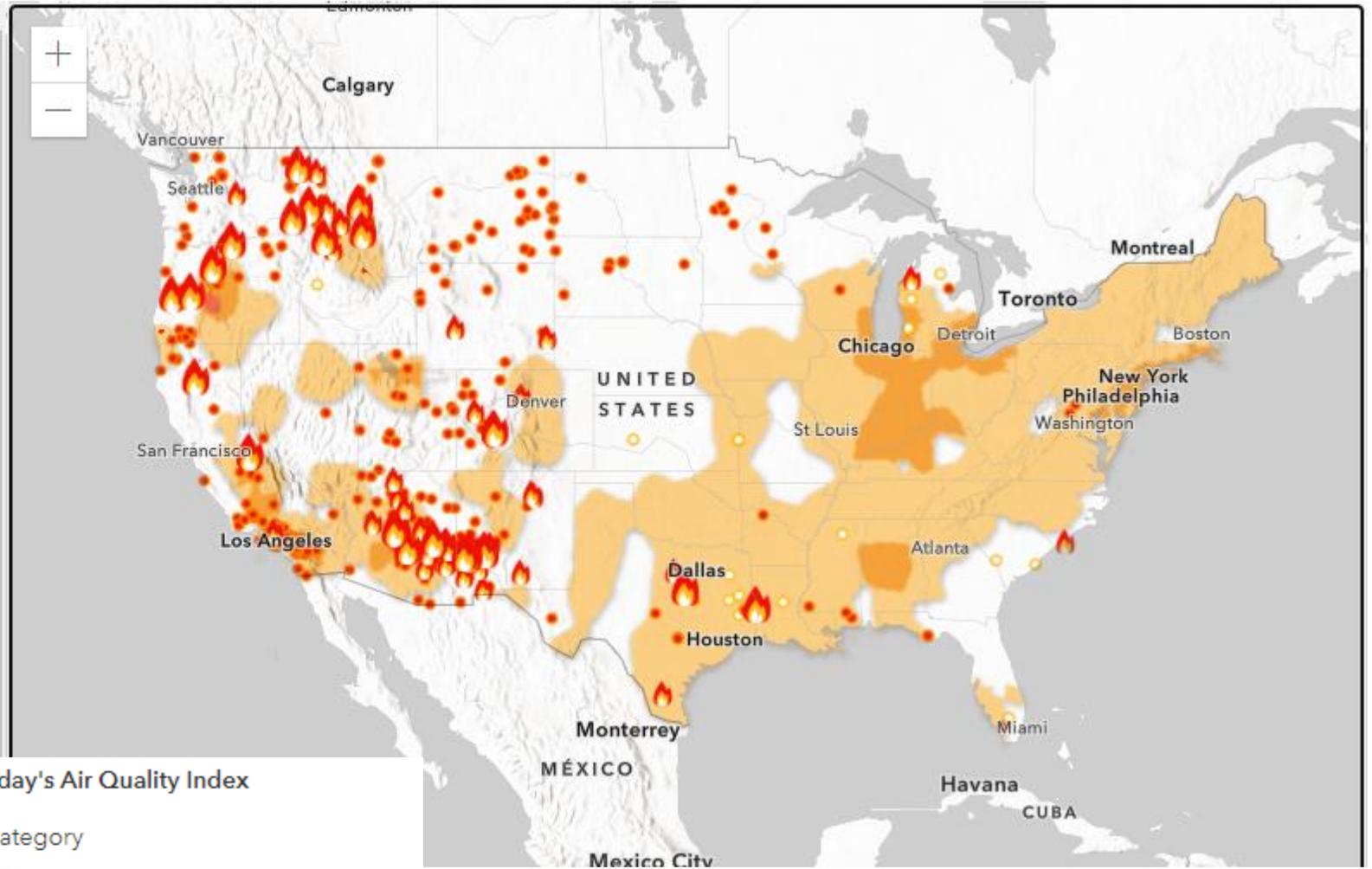
Moderate

Unhealthy for Sensitive Groups

Unhealthy

Very Unhealthy

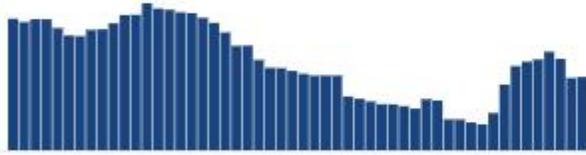
Hazardous



Drought

People experiencing drought **72,839,866**

Last 52 weeks

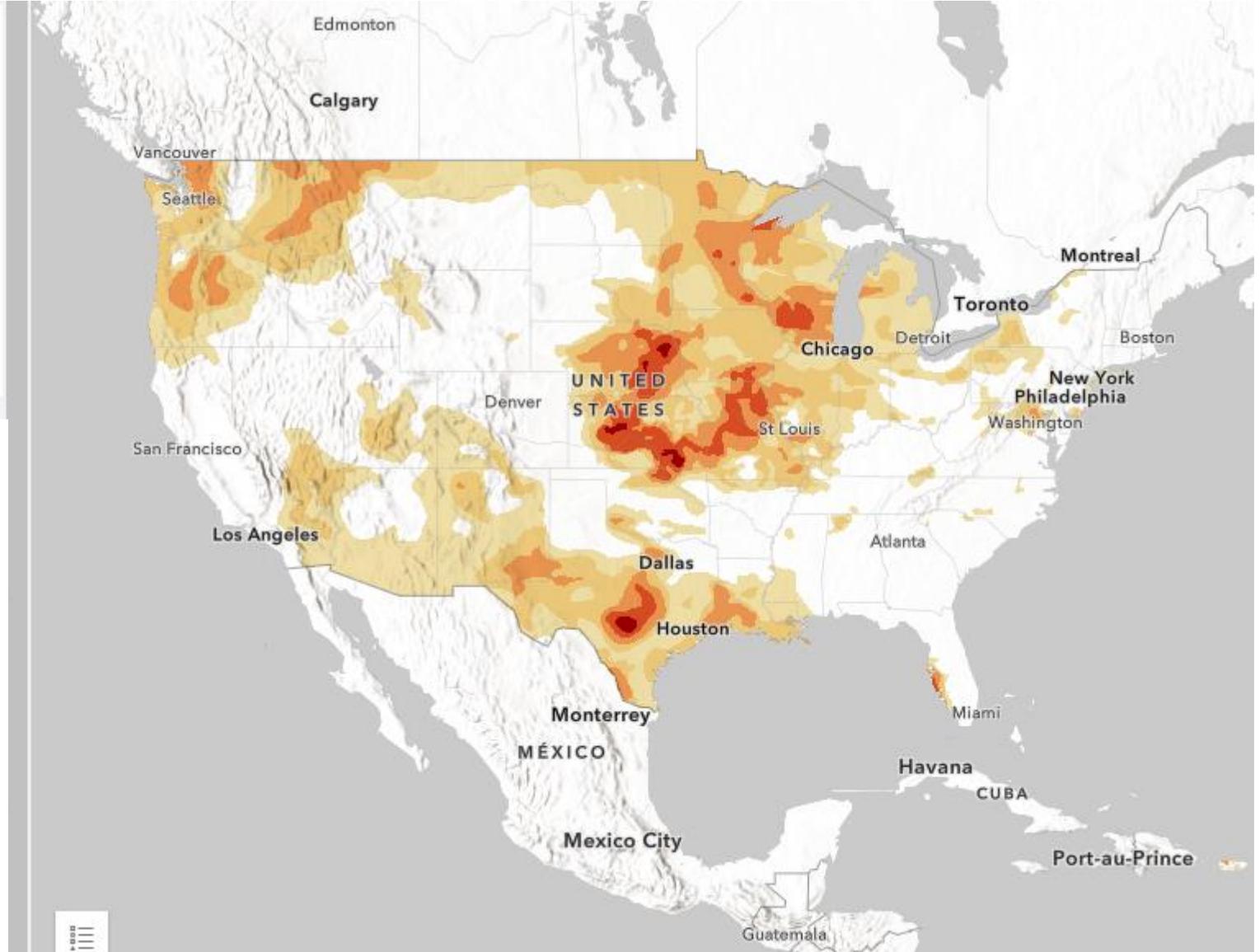


Source: NOAA/NIDIS Drought.gov

USA Drought Intensity - Current Conditions

Drought Status

-  Abnormally Dry
-  Drought - Moderate
-  Drought - Severe
-  Drought - Extreme
-  Drought - Exceptional



Drought

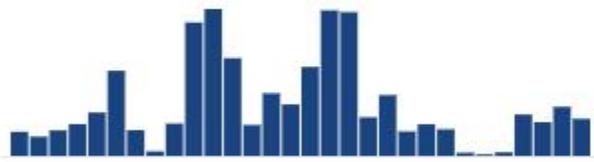
People experiencing drought **72,839,866**

Source: NOAA/NIDIS Drought.gov

Inland Flooding

People under flood alerts **16,515,208**

Last 30 days



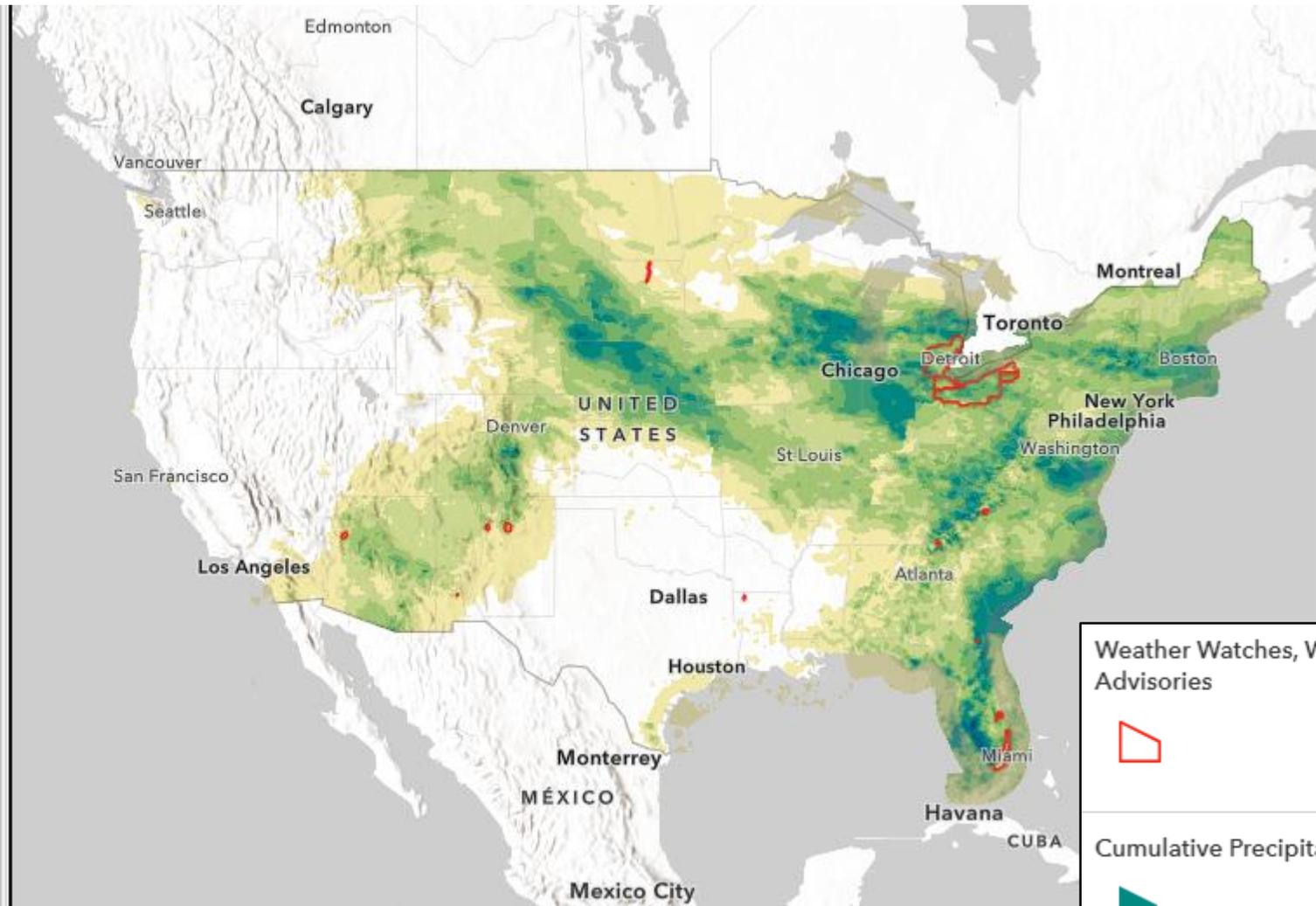
Source: NOAA National Weather Service

Coastal Flooding

People under flood alerts **0**

Source: NOAA National Weather Service

Extreme Heat



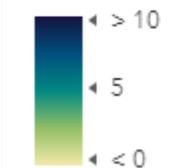
Weather Watches, Warnings, and Advisories



Cumulative Precipitation (72 hour)



Precipitation (inches)



Inland Flooding

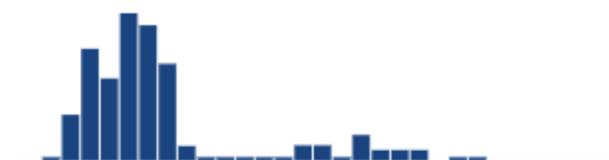
People under flood alerts **16,515,208**

Source: NOAA National Weather Service

Coastal Flooding

People under flood alerts **0**

Last 30 days

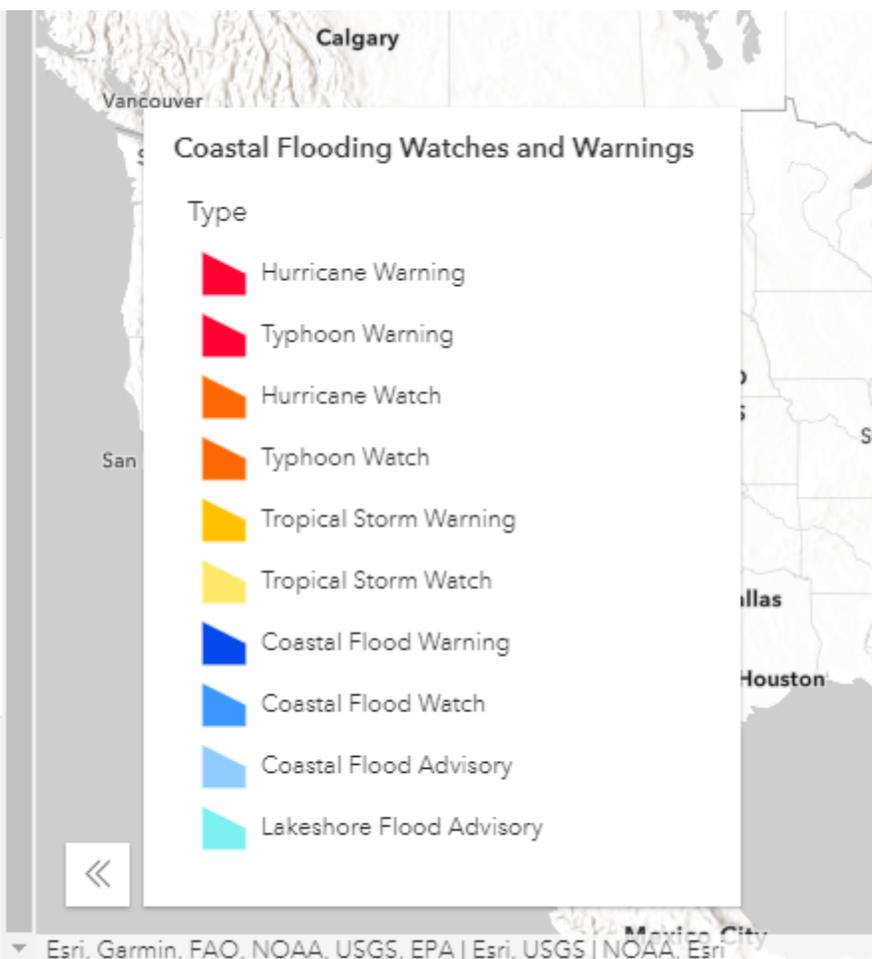


Source: NOAA National Weather Service

Extreme Heat

People under heat alerts **156,225,629**

Source: NOAA National Weather Service



Weather Watches, Warnings, and Advisories

Type

-  Excessive Heat Warning
-  Excessive Heat Watch
-  Heat Advisory

Maximum Temperature

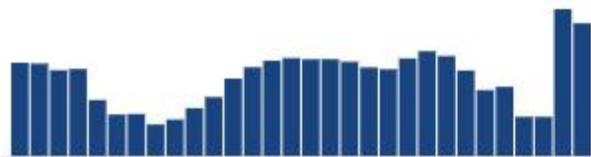
°F Range

-  120 to 150
-  115 to 120
-  110 to 115
-  105 to 110
- 

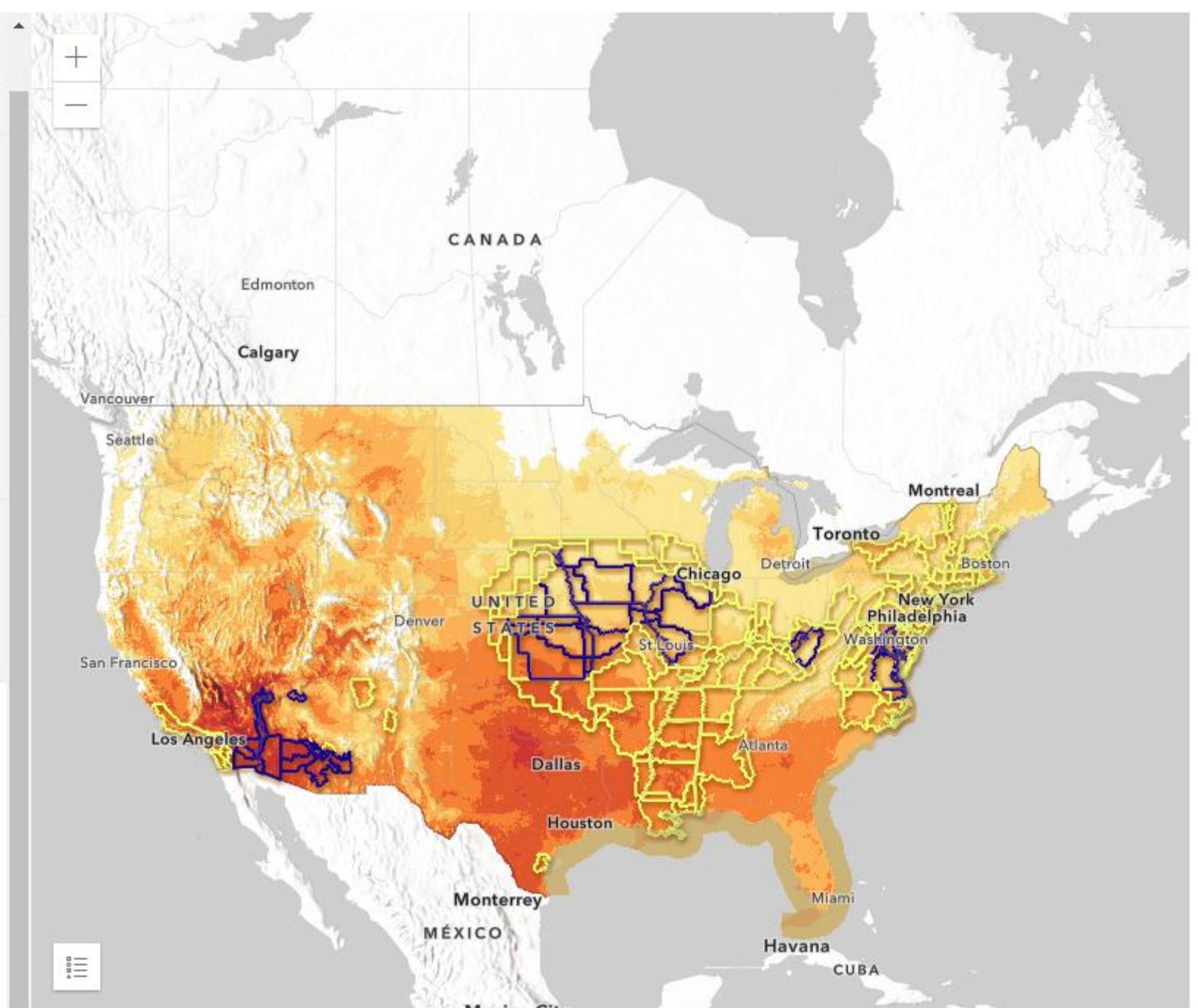
Extreme Heat

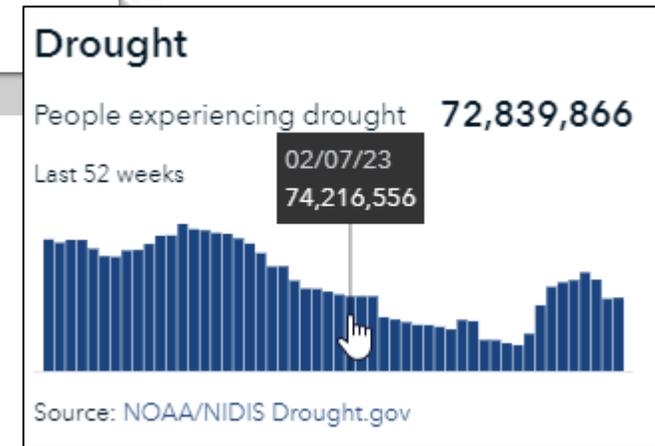
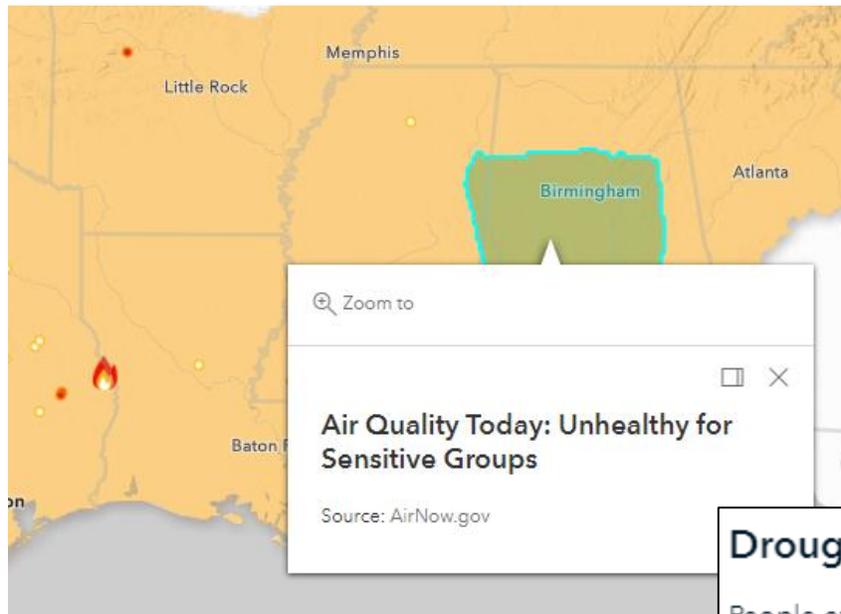
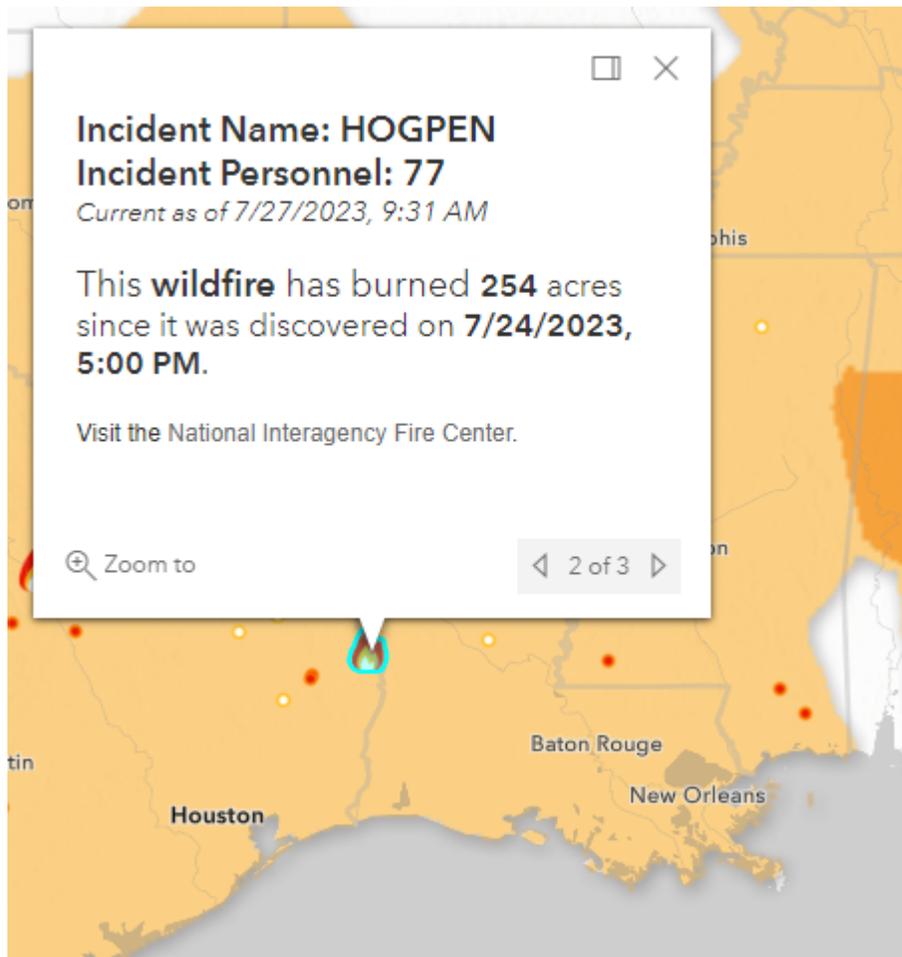
People under heat alerts **156,225,629**

Last 30 days



Source: NOAA National Weather Service





CMRA Assessment Tool

Check how climate conditions in your location are projected to change over the next several decades. Explore the results to recognize if the things your community values—assets such as people, property, and infrastructure—could be exposed to climate-related hazards.

[Launch the CMRA Assessment Tool](#)

[Explore the User Guide](#)

Monroe County, FL



33.8% of Population in Disadvantaged Communities

Building Code: Resistant

Select a geography:

- Census Tract
- County**
- Tribal Land



University of South Florida, FDEP, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | Esri, USGS Powered by Esri

Climate Projections

Map Exploration

Climate Hazards

Extreme Heat

Drought

Wildfire

Flooding

Coastal Inundation

Climate Projections for Early Century (2015–2044)

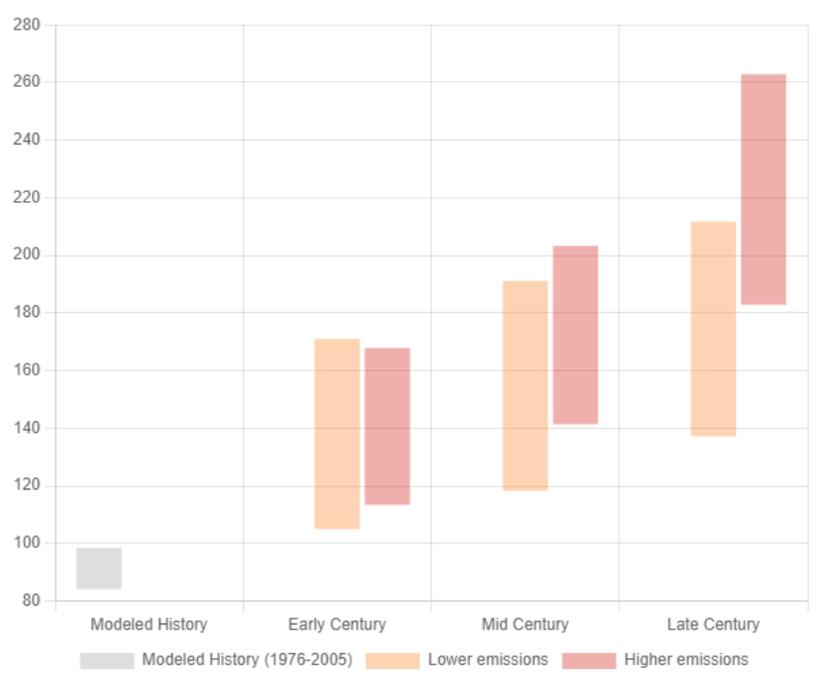
Lower emissions Higher emissions

	Lower emissions	Higher emissions
Annual days with maximum temperature > 90°F	141.6 Days + 50.3 since 1976-2005	145.6 Days + 54.3 since 1976-2005
Annual days with maximum temperature > 95°F	26.1 Days + 22.0 since 1976-2005	29.8 Days + 25.8 since 1976-2005
Annual days with maximum temperature > 100°F	0.2 Days + 0.2 since 1976-2005	0.3 Days + 0.3 since 1976-2005
Annual days with maximum temperature > 105°F	0.0 Days No change since 1976-2005	0.0 Days No change since 1976-2005
Annual single highest maximum temperature	97.9 °F + 2.3 since 1976-2005	98.0 °F + 2.4 since 1976-2005
Annual highest maximum temperature averaged over a 5-day period	96.0 °F + 2.2 since 1976-2005	96.2 °F + 2.4 since 1976-2005
Cooling-degree days (CDD)	4,702.1 Degree Days + 684.6 since 1976-2005	4,763.7 Degree Days + 746.2 since 1976-2005

Indicator Details

Chart Table

Annual days with maximum temperature > 90°F

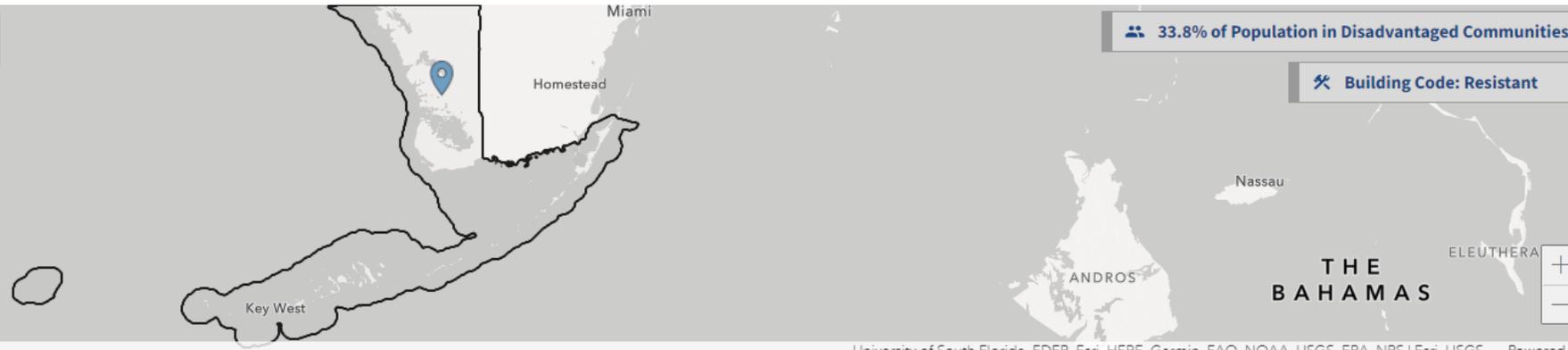


Monroe County, FL

Select a geography: Census Tract County Tribal Land

33.8% of Population in Disadvantaged Communities

Building Code: Resistant



Climate Projections

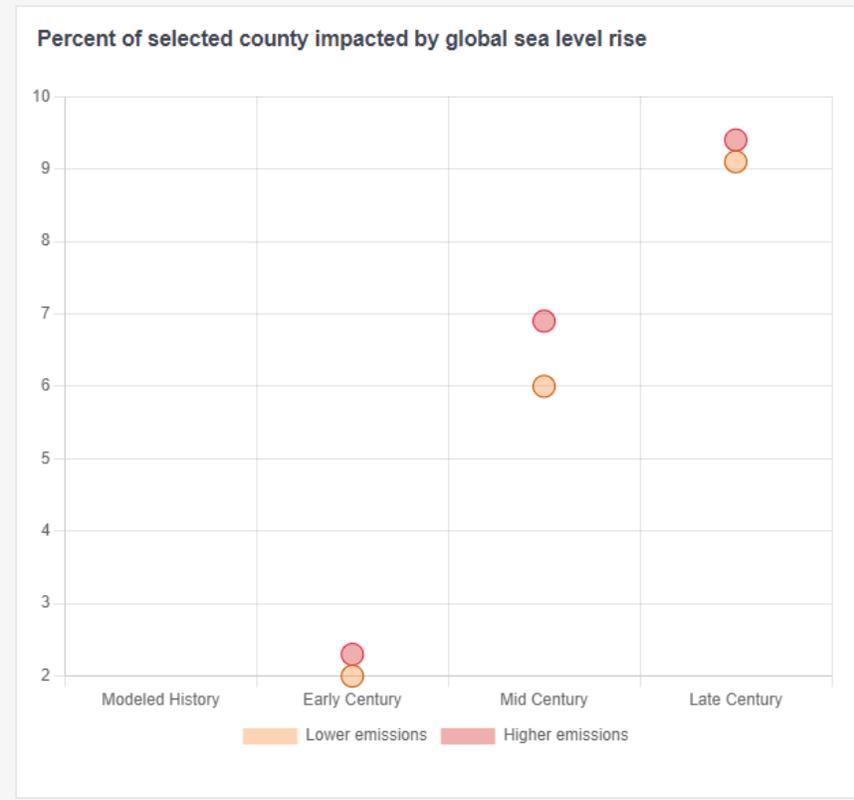
Map Exploration

- Climate Hazards
- Extreme Heat
- Drought
- Wildfire
- Flooding
- Coastal Inundation

Climate Projections for Late Century (2070–2099)

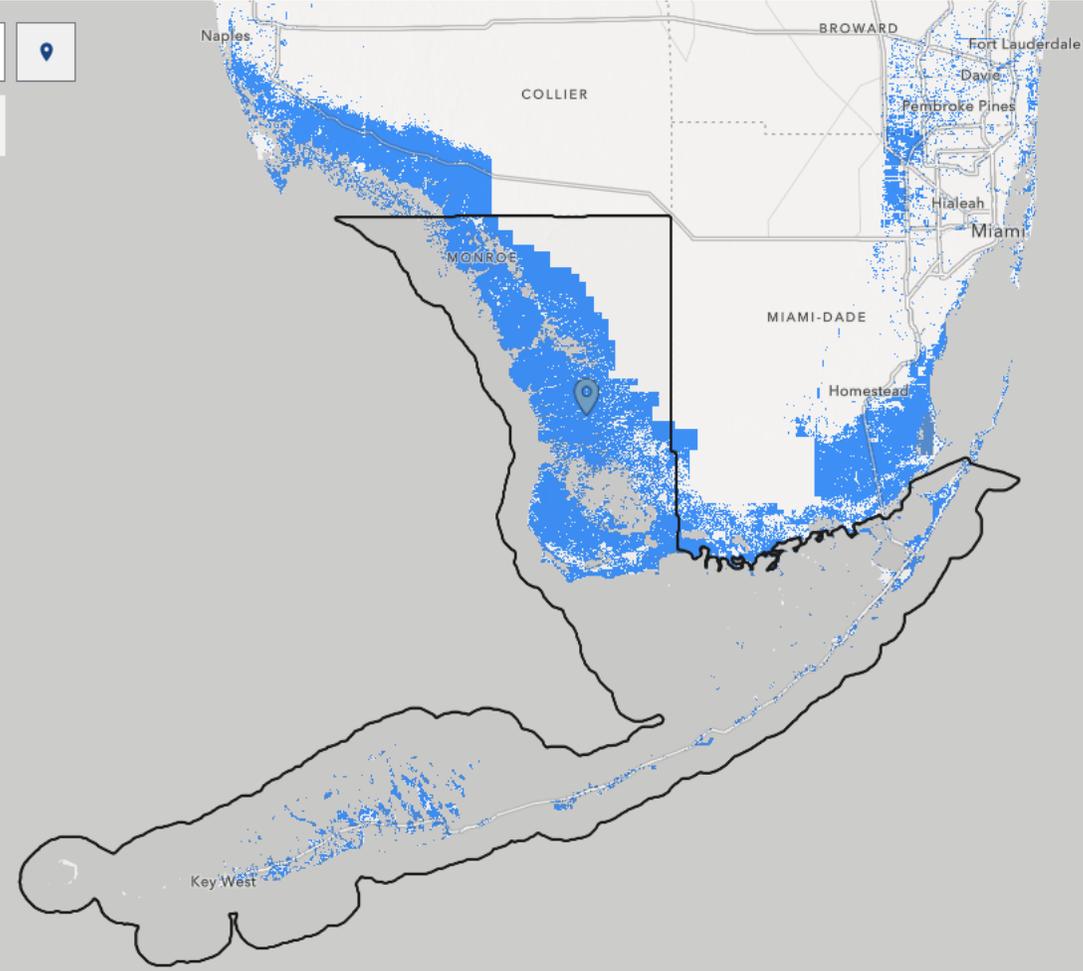
	Lower emissions	Higher emissions
Percent of selected county impacted by global sea level rise	9.1 %	9.4 %

Indicator Details Chart Table



Monroe County, FL

Select a geography:



33.8% of Population in Disadvantaged Communities

Building Code: Resistant

Click on the map to get information for the selected indicator

Climate Indicator Value: Sea Level Rise Leveed Areas



Climate Projections

Map Exploration

Hazard Report

Coastal Inundation

📍 Monroe County, Florida



Total Population
📊 75,798



Non-Hispanic White Population (%)
34%



Income Below Poverty in Last 12 Mo (%)
11%



Building Codes Hazard Resistance
📌 Resistant



% Population Disadvantaged
📊 33.82%



[Explore additional data](#)



National Risk Index Rating
Relatively Moderate



according to the [FEMA National Risk Index](#)

Coastal Inundation Annualized Frequency
📊 2.12

Expected Annual Loss Rating
📌 Relatively High

Expected Annual Loss Total (\$)
📊 \$8,514,936.89

Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
		Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
Sea level rise:							
Percent of selected county impacted by global sea level rise	N/A	2%	2%	6%	7%	9%	9%

Questions?

Slides: <https://z.umn.edu/FedGovMapResources>